The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 568.—Vol. XVI.] LONDON: SATURDAY, JULY 11, 1846. [Price 6d.

TO ENGINEERS, RAILWAY CONTRACTORS, AND OTHERS.

MR. R. K. DAVIS begs to announce, that he has received instructions from the company to SUBMIT TO PUBLIC COMPETITION, on Thursday, the 16th of July, at One o'clock, in Six Lots, at the Auction Mart, Bartholomew-lane, the whole of the PLANT and MATERIALS of the

EXPERIMENTAL RAILWAY ON WIMBLEDON COMMON, 1

constructed to show the working of Prosser's Patent Guide Wheels: comprising—
A LOCOMOTIVE-ENGINE and TENDER, in excellent working order, with 12-inch cylinders, 18-inch stroke, and adapted to the usual gauge of 4 ft. 8½ in.
A second-class CARRIAGE and THREE LUGGAGE WAGGONS, all fitted with Prosser's Patent Guide Wheels; which, although constructed to run on a wooden rail, possess the singular advantage of working equally well on rails of any other description, with less friction than the common flange-wheel.
Also, about 1400 cubic feet of 6-inch BEECH QUARTERING; and 3300 9-feet FIR SLEEPERS, 12 ft. by 6 ft., and 10 ft. by 5 ft.—now forming 1½ mile of the experimental railway; about SIX TONS of IRON RAILS and CHAIRS; and the MATERIALS forming the sheds, offices, and cottage.
May be viewed (any day) between the hours of Eight and dusk, and particulars obtained at the usual inns in the neighbourhood; on the premises, Wimbledon; at the offices of the company, 36, New Broad-street; and of Mr. R. K. Davis, 68, Mark-lane.
*** The Engine will be at work on the line on Tuesday and Wednesday, the 14th and 15th inst., from One till Five o'clock, where it may be seen.

VALUABLE MINING MATERIALS FOR SALE.—TO BE SOLD, BY PUBLIC AUCTION, by F. A. DAVIS, on Tuesday, the 21st day of July next, at Eleven o'clock in the forenoon, at WHEAL BETSY MINE, in the parish of MARYTAVY, near TAVISTOCK, Devon, the MATERIALS of the said MINE—

CONSISTING OF

1 WATER-WHEEL, 40-feet diameter, 4-feet in breast
1 ditto 40-feet ditto 4-feet 4-inches in breast
1 Cast-iron axle, for a 40 or 50-feet diameter, 4-feet 4-inches in breast, with 3 new spare cranks to match the above
1 Drawing machine wheel, 27-feet diameter, 3-feet 6-inches in breast
1 Crushing machine ditto, 14-feet 6-inches diameter, 4-feet 9-inches breast, with jigging machine attached
1 Stamps wheel, 13-feet 6-inches ditto, 2-ft. 9-in. breast, with 3 head stamps, complete

PUMPS.

3	9-feet and 1 6-feet	20-inch	2	9-feet	19-inch
2	9-feet	18-inch	3	9-feet	17-inch
9	9-feet	16-inch	24	9-feet	15-inch
7	9-feet	14-inch	5	9-feet	13-inch
12	9-feet and 1 6-feet	12-inch	3	9-feet	11-inch
13	9-feet and 1 6-feet	10-inch	16	9-feet	9-inch

Sundry matching pieces, from 17 to 12 inches diameter, with a quantity of wood pumps, of various sizes

1	10-feet	14-inch	WORKING-PIECE		
1	9-feet	7-inch ditto	1	6-feet	13-inch ditto
1	9-feet	6-inch ditto	1	7-feet 6-inches	14-inch ditto
2	6-feet	15-inch ditto	3	6-feet	10-inch ditto
1	6-feet	9-inch	DOOR-PIECE		
1	5-feet	15-inch ditto	1	9-feet	14-inch ditto
1	9-feet	11-inch ditto	1	9-feet & 1 6-ft.	10-inch ditto
1	9-feet	12-inch (sinking)	WINDBORE		

1 16-inch PLUNGER POLE, 10-feet long, with cylinder, stuffing-box, and glands
1 16-inch ditto 9 feet 6 inches long
1 12-inch PLUNGER POLE, 9 feet long
1 11-inch ditto 10 feet long
2 3-feet 16-inch H-pieces
1 4-feet 6-inches 10-inch Y-piece
11 Main balance and other bobs, with saddles and brasses
32 Fathoms of 12-inch, 60 fathoms of 11-inch, and 165 fathoms of 9-inch connection rods
81 Fathoms of 8-inch round iron, and 35 fathoms 2½ do. flat rods
200 Fathoms 11-16th inch machine or whim chain
3 Capstans and shears complete
160 Fathoms of 11-inch, 70 fathoms ditto, and 110 fathoms of 10-inch capstan rope
200 Fathoms rail iron, 24 by 4 inch, with saddles
1 36, 1 33, and 1 30-inch smiths' bellows

A quantity of new iron of various sizes, and about 50 tons of useful iron for mining and other purposes, consisting of rod plates, bolts, bars, yokes, and glands, bucket rods, &c. &c.; also, a quantity of miners' and smiths' tools, timber, rope, a large beam and scales, miners' dial, with a great variety of other articles.
Wheal Betsy Mine, June 24, 1846. 2

SOUTH STAFFORDSHIRE.

VALUABLE MINERAL PROPERTY, CRADLEY, near STOURBRIDGE.—Messrs. OATES & PERRENS beg to announce to CAPITALISTS, and the PUBLIC generally, that they have received instructions to OFFER FOR SALE, a very valuable MINERAL PROPERTY, at Netherend and Cradley, in the immediate neighbourhood of Stourbridge. It will be divided into lots of suitable size, and will be offered at the Talbot Hotel, Stourbridge, on Friday, the 24th day of July, 1846, punctually at Five o'clock in the afternoon. 3
Printed particulars, with plans annexed, may be had on application to Messrs. Hayes and Son, solicitors, Halesowen; Mr. J. Mathews, Park Hall, Kidderminster; or of the auctioneers, Stourbridge.

VALUABLE SPARE MINING MATERIALS FOR SALE, at the PROVIDENCE MINES, near ST. IVES, CORNWALL—viz:
An excellent 30-inch cylinder PUMPING-ENGINE, with boiler, about 7 tons.
A capstan shears, 9-inch capstan rope, 11-inch H-piece and top-door, 8-inch knee-piece and top-door, 8-inch stuffing-box and gland, 2 8-inch 3-feet door-piece, 1 6-inch 6-feet ditto, 1 8-inch 4-feet bucket door-piece, 60 fathoms of 9-inch pumps, 28 fathoms of 8-inch ditto, 8 fathoms 7-inch ditto, 2 9-inch, 1 8-inch, 2 6-inch, and 1 5-inch windbores, rod-plates and pins, 50 fathoms horizontal iron rods, 1½-inch round; 1 fend-off and a Y-bob, 2 dozen whim sheaves, of various sizes; a quantity of flanch bolts, staples, and glands, 30 fathoms of bucket-rods, 1 and 1½-inch iron, a WATER-PRESSURE ENGINE, 8-inch cylinder, with nozzles, on the most approved plan.
For particulars, application should be made to Capt. Penberthy, on the mine, and to Mr. Samuel Higgs, Penzance.—Dated July 1, 1846. 4

PARK HILL MINES, DEAN FOREST—consist of an extensive tract of IRON ORE, in conjunction with one of COAL—conveniently situate for the SUPPLY of BLAST-FURNACES, which may be erected adjacent. The IRON MINE includes TWO VEINS of ORE, containing 40 per cent. of iron. The COAL-FIELD includes FOUR VEINS of excellent COAL. The whole can be drained by level. It is desired to FORM a JOINT-STOCK COMPANY, to OPEN the MINES and ERECT FURNACES; or a PARTNERSHIP will be entered into, or a LEASE granted. The return on the investment will exceed 20 per cent.—For particulars apply (if by letter, post-paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire. 5

STEAM COAL—SUPERIOR VEINS AND SEAMS OF COAL TO BE LET, NEAR LLANELLY, SOUTH WALES.—TO BE LET, and entered upon immediately, all the SEAMS and VEINS of COAL under ONE THOUSAND TWO HUNDRED and FIFTY ACRES of LAND, situate in the parishes of Llangennech and Llanedy, in the county of Carmarthen—joining the Llanelly, and close to the South Wales, Railway, and within a short distance from sea-ports.—Apply to Messrs. Adam Murray and Son, 35, Craven-street, London. 6

TO MINING AND RAILWAY COMPANIES, &c.—A GENTLEMAN, who has had upwards of 15 years' experience in mining and railway engineering, is in WANT of a SITUATION, as COLLIERY VIEWER, MINING or RAILWAY ENGINEER. First-rate references can be given, and will be required.—Letters (post-paid), addressed "Q. R. S.," Post-office, Newcastle-on-Tyne, will receive immediate attention.—N.B. The advertiser has no objections to go abroad. 7

FORGE HAMMER.—WANTED IMMEDIATELY, a LIFT, or TILT, HAMMER, complete, without driving power.—Parties offering the same will meet with prompt attention by addressing to Mr. R. Bouch, Thursby, near Carlisle. Wood Bank Iron-Works, July 7, 1846. 8

WINDING-ENGINE WANTED.—WANTED, a SECOND HAND WINDING-ENGINE, of from 30 to 40-horse power.—Apply, with particulars, to G. S. Ford and Son, Bryndû Colliery, Pyle, Glamorganshire.
Dated Bryndû Colliery, Pyle, Glamorganshire, July 1, 1846. 9

TO IRONFOUNDERS.—IRONFOUNDERS DISPOSED to CONTRACT with the TOWN COUNCIL of BATH for the DELIVERY of about THREE MILES IN LENGTH of SIX-INCH COLD-BLAST IRON WATER-PIPE, and about HALF THAT LENGTH of FIVE-INCH, may obtain further particulars on application to Messrs. Manners and Gill, architects, Bath. Tenders to be sent (endorsed "Tender for Pipes") to B. Peach, Esq., treasurer, Guildhall, Bath, on or before the 25th inst.—The lowest tender will not necessarily be accepted.—Bath, July 10

CONTRACTORS WANTED.—WANTED, by the CLYDE TRUSTEES, CONTRACTORS for BUILDING about TWO THOUSAND TWO HUNDRED and EIGHTY LINEAL FEET of QUAY WALL, &c., in continuation westward of the quay walls on the south side of the harbour of Glasgow, agreeably to the lines delineated on the Parliamentary plans of the river and harbour.
The detailed plans and specifications of the works, with the forms of tender, &c., will be seen at the office of Messrs. Walker and Burgess, civil engineers, Great George-street, Westminster, London; or in the hands of Mr. Brunner, resident engineer of the river and harbour, on and after the 6th of July next; and sealed tenders, for the execution of the works, to be lodged at the treasurer's office, 16, Robertson-street, Glasgow, on or before the 20th of July next.
Clyde Trustees' Chambers, Glasgow, June 8, 1846. 11

CHATHAM NICKEL AND COBALT MININC COMPANY. SITUATE AT CHATHAM, STATE OF CONNECTICUT, UNITED STATES.
Capital £20,000, in 4000 shares, of £5 each.—Deposit £1 per share.
This company is incorporated pursuant to the law of the State of Connecticut, which limits the liability of the shareholders to the amount paid upon their shares. 12
"The ores have been analysed by eminent practical chemists of both England and America, and have been found to average 18 per cent. cobalt and nickel—about 4 per cent. cobalt, and 12 to 18 per cent. nickel."
Application for shares, and full particulars, to be obtained to the solicitors of the company, Hull Terrell, Esq., 30, Basinghall-street; and of Mr. R. E. Little, stockbroker, 11, Warnford-court, Throgmorton-street, London.

PENNANT LEAD AND COPPER MINING COMPANY, NOW IN WORK ON THE "COST-BOOK" PRINCIPLE. 13
Prospectuses, reports, maps, and every information, may be obtained at the offices of the company, No. 4, Salisbury-street, Strand; the solicitors, Messrs. Pocock and Marston, No. 10, Norfolk-street, Strand; or Charles Godwin, Esq., stock and share broker, No. 2, Royal Exchange-buildings.

WHEAL HOLWELL MINING COMPANY. IN 2048 SHARES.
This COPPER MINING SETT, lately opened, is situated in the parish of STOKE CLIMSLAND, CORNWALL, about one mile north-west of Lamerhoe Wheal Maria, and two and a half miles north-west of the Great Devonshire Consols (late the Great Wheal Maria), and is held under a license granted by his Royal Highness Albert Edward, Prince of Wales, and will be worked on the cost-book system, under which the liabilities of the shareholders are only from month to month, all accounts being audited and settled monthly. It is divided into 2048 shares, price 1*l.* 10s. per share, at which the greater portion of the shares have been disposed of. A finance committee will be chosen by the shareholders from amongst themselves at their first meeting. The management will be exclusively in London, the committee meeting once a month, or oftener, if necessary, and their services will be gratuitous.
By the 63d section of the Act for the Registration of Joint Stock Companies (7 and 8 Vic. cap. 110), it is enacted. "That nothing in this Act contained shall extend, or be construed to extend, to any partnership formed for the working of mines, minerals, and quarries, of what nature soever, on the principle commonly called the Cost Book principle."
Among the advantages of the Cost-Book system, may be mentioned that of any shareholder having the option at once to terminate his liability by relinquishing his shares, when all responsibility ceases for expenses incurred from the date of his leaving the company.—A surface plan, showing the lodes already discovered, may be inspected; and the following report from Capt. Floyd on the mine is highly important:—
"We have now discovered five copper lodes running at an average bearing of 12 deg. south of east.—No. 1 lode is 3 ft. wide, composed of gossan, prian, soft spar, and mundic. A very kindly lode. 14
No. 2 is 12 ft. wide, composed of a beautiful gossan, strongly impregnated with mundic; and from its character and locality, and being in such a splendid stratum of ground, there is no doubt whatever that it will turn out abundance of ore in depth. This lode is considered by all practical miners to excell all lodes yet discovered west of the Great Wh. Maria.
No. 3 is a parallel lode with the last mentioned, and is 4 ft. wide, composed of gossan, prian, and mundic, and intermixed with copper ore of a good quality; and I have no doubt it will ultimately prove very productive.
We have not sufficiently opened on No. 4 and 5 lodes, to be able to speak to their character and bearing. As far as I see, they are very kindly lodes indeed.
And now to conclude: with pleasure I congratulate you with having the good fortune to meet with such an undertaking.
June 21, 1846. SAMUEL FLOYD, Captain of the Mine."
Applications for the remaining shares may be made to the secretary of the company, James Crofts, Esq., No. 4, King-street, Cheapside, where prospectuses, and all details respecting the mine, may be obtained.—Dated July 7, 1846.

PRINCE EDWARD MINING COMPANY. IN 2048 SHARES.
This COPPER and LEAD MINING SETT, lately opened, is situated on TREMOLLET DOWN, in the parish of STOKE CLIMSLAND, CORNWALL, about three miles westward of the Great Devonshire Consols, (late the Great Wheal Maria,) one mile west of Wheal Holwell, and is held under a license granted by his Royal Highness Albert Edward, Prince of Wales, at 1-15th dues, and will be worked on the "COST-BOOK" system, under which the liabilities of the shareholders are only from month, to month, all accounts being audited and settled monthly. It is divided into 2048 shares, and a payment of 1*l.* 10s. per share will be required at the time of allotment, when each adventurer is required to sign the Cost Book. A finance committee will be chosen by the shareholders from amongst themselves at their first meeting immediately after the shares are disposed of. The management will be exclusively in London, the committee meeting once a month, or oftener, if necessary, and their services will be gratuitous.
By the 63d section of the Act for the Registration of Joint Stock Companies (7 and 8 Vic. cap. 110,) it is enacted, "That nothing in this Act contained shall extend, or be construed to extend, to any partnership formed for the working of mines, minerals, and quarries, of what nature soever, on the principle commonly called the Cost Book principle."
Among the advantages of the Cost-Book system, may be mentioned that of any shareholder having the option at once to terminate his liability by relinquishing his shares, when all responsibility ceases for expenses incurred from the date of his leaving the company.—A surface plan, showing the lodes discovered, may be inspected; and the following report from Capt. Seccombe on the mine is deserving of attention:—
"In compliance with your request, I have this day inspected a sett, called Tremollet Down Consols, situate in the parish of Stoke Climsland, in the county of Cornwall, and find it a very extensive sett, being about 1036 fms. from north to south, and 670 fms. from east to west. Several east and west lodes are known to run through the sett, some of which have been laid open near the surface by costeaning—one of which is a large lode, and found to contain a quantity of gossan. This lode is not yet laid open to a sufficient depth to enable an opinion being formed as to its future productiveness; the lodes are not running parallel, but approximate and intersect each other. At the junction of lodes, they are often found to contain large deposits of ore. I consider it necessary to lay open the whole of the lodes by costeaning, and sink a few fathoms on their course at different points, to ascertain the most desirable point to commence permanent operations for the development of the lodes in depth; there is a large stream of water, that can be made available for giving the mine a partial trial, and, when required, can be used for crushing and dressing ores, &c. A large north and south lode has also been discovered, and sunk on to the depth of seven fms.—at which point it is composed chiefly of gossan, quartz, and mundic, and will be of great advantage for cross-cutting the east and west lodes. 15
I am, Sir, your obedient servant,
May 25, 1846." "SAMUEL SECCOMBE."
Application for shares may be made to the secretary of the company, James Crofts, Esq., No. 4. King-street, Cheapside, where prospectuses, and all details respecting the mine, may be obtained.—Dated July 1, 1846.

NOTICE TO THE MANAGERS OF MINING COMPANIES, SMELTING WORKS, &c.
Mr. MITCHELL (late Mitchell and Field) begs to announce, that ASSAYS and ANALYSES of all descriptions of ORES, MINERALS, and FURNACE PRODUCTS, are conducted at his LABORATORY, 23, HAWLEY-ROAD, KENTISH TOWN, to which direction all communications are to be addressed. 16
N.B.—Instruction in all branches of assaying and mineral analysis as usual.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."
Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 17

MANUFACTURERS' MUTUAL PROTECTION SOCIETY
TRUSTEES.
ROBERT ALEXANDER GRAY, Esq., 29, St. Swithin's-lane.
JOHN RATLIFF, Esq., Wood-street, Cheapside.
JOSEPH TRITTON, Esq., Lombard-street.
BANKERS.
Messrs. Barclay, Bevan, Tritton, and Co., London. 18
SOLICITORS.
Messrs. Vallance and Vallance, 20, Essex-street, Strand, London.
This society is established for the purpose of protecting Merchants and Manufacturers from the fraudulent use and imitation of their names, trade-marks, and manufactures.
The courts of law in this country, as also those of the United States and France, afford to the British manufacturer the fullest protection. Experience has, however, shown that there are hundreds of merchants and manufacturers who are suffering from a fraudulent imitation of their names, manufactures, and trade-marks, but who do not feel disposed to enter into litigation, and fight individually a battle which is really for the benefit of all manufacturers.
For a small annual subscription, and without any further charges, or incurring any further liability or expense, each member has the opportunity of obtaining, free from all charge, opinions as to his rights in respect of any fraudulent imitation of his name, trade-marks, or manufactures; and he is also entitled to put the society in motion against any person who may counterfeit his name or trade-marks, whether in the United Kingdom, on the continent of Europe, or in any part of the British dominions, or the United States. The whole cost of such proceedings is borne by the funds of the society.
The funds of the society are vested in the trustees, and the affairs are under the control of the committee of management.
Prospectuses, and any further information, may be obtained on application, by letter, addressed to the secretary; or, personally, at the office of the society, No. 20, Essex-street, Strand, London.

JAMES LANE, SHARE AGENT, *HALL OF COMMERCE, LONDON.* 19

JOHN PHILLIPS, MINE SURVEYOR AND REPORTER, *POOL, ILLOGAN, CORNWALL,*
OFFERS his SERVICES, by the promptest attention, to any business of INSPECTION and ADVICE.—Terms, One Guinea per day, besides consequent expenses. 20

WILLIAM TRENERY, DEALER IN RAILWAY AND MINING SHARES.—ESTABLISHED TEN YEARS.
OFFICES, No. 50, THREADNEEDLE-STREET, LONDON. 21

PAUL RABEY, JUN., AND CO., MINE AND RAILWAY SHARE AGENTS.
OFFICE—No. 12, COPTHALL-COURT, LONDON. 22

MESSRS. LENTHORNE, JONES, AND CO., MINING, STOCK, AND GENERAL SHARE AGENTS.
Town agents for the HEWAS CONSOLS TIN AND COPPER MINE, CORNWALL.
*** Every information will be given to parties desirous of joining this adventure.
48, *THREADNEEDLE-STREET.* 23

WILLIAM FOX AND SON, No. 53, CASTLE-STREET, LIVERPOOL, have always on SALE PIG-IRON, RAILWAY BARS, CHAIRS, and IRON of every description.—TIN PLATES, WIRE, &c. 24

MINING OFFICES, REMOVED FROM 16, CORNHILL, to 1, THREE KING COURT, LOMBARD-STREET.—Mr. R. TREDINNICK (of Cornwall), having established PRACTICAL AGENTS and CORRESPONDENTS in every MINING DISTRICT, whereby he obtains early and accurate information respecting MINES, proffers his services to capitalists and adventurers in the PURCHASE and DISPOSAL of SHARES. 25

MINING PROPERTY.—CAPITALISTS who are disposed to INVEST in CORNISH and FOREIGN MINES, will find the present opportunity very favourable for so doing. From large sums having been lately diverted from such investments for railway speculations, standard mines are now selling at prices that will pay the purchaser 20 per cent. per annum for his outlay. There are also other mines that are on the eve of paying dividends, which can be recommended with confidence.
Applications to be made to Mr. JAMES HERRON, mining agent, No. 3, Adam's-court, Broad-street, London. 26

MINING OFFICES, No. 1, ST. MICHAEL'S-ALLEY, *CORNHILL, LONDON.*
Messrs. WATSON & CUELL have received instructions to PURCHASE SHARES in West Caradon, West Maria, Wheal Mary Ann, Trewallack, Stray Park, Condurrow, and Wheal Gill Mines; and have FOR SALE, SHARES in East Pool, Wheal Bucketts, Trelawney, Marke Valley, South Caradon, Holmbush, Devonshire Great Consols, &c. 27
Mr. WATSON, F.G.S., having RETURNED from a MINING TOUR through the counties of CORNWALL and DEVON, will be happy to give any INFORMATION with regard to the MINES—some of which, at this moment, are paying 18 and 20 per cent. upon market prices.

TAMAR SILVER-LEAD MINING COMPANY. SMELTING DEPARTMENT.
The SECOND HALF-YEAR'S INTEREST, at £5 per cent. per annum, to the 30th ult., on the certificates, will be PAID on Wednesday, the 15th inst., and following Wednesdays, between the hours of Twelve and Three o'clock.—The certificates must be left at the office two clear days, to be examined and marked. 28
44, Finsbury-square, July 1, 1846.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of proprietors of this association will be HELD at the office of the company, No. 36, Austinfriars, on Friday, the 24th July inst., at One o'clock precisely.
By order of the court of directors, 29
26, Austinfriars, July 6, 1846. WM. LECKIE, Secretary.

COPIAPO MINING COMPANY.—Notice is hereby given, that the HALF-YEARLY MEETING of Shareholders of this Company will be held at the Company's Office, 22, Austin Friars, on THURSDAY, the 23d of JULY, inst., at One o'clock precisely. At which Meeting, John Deacon, Esq., and Thomas Richardson, Esq., Directors, and John Labouchere, Esq., Auditor, who go out of office by rotation, being eligible, offer themselves for re-election.
This Meeting is made SPECIAL, for the consideration of the present state of the Company's affairs, and certain proposals and statements then to be submitted to them. 30
By order of the Directors,
22, Austin Friars, July 9, 1846. FRED. GRELLET, Sec.

ROYAL SANTIAGO MINING COMPANY.—The directors hereby give notice, that a SIX MONTHS' DIVIDEND of ONE POUND THREE SHILLINGS per share, declared this day, will be paid at the Office of the Company, on and after THURSDAY, the 16th inst. The dividend warrants to be left two clear days before the day of payment.—38, Broad-street-buildings, July 8, 1846. 31

ASTURIAN MINING COMPANY.—Notice is hereby given, that the shares of which the numbers are here published are liable to forfeiture for non-payment of calls, and will be sold for the benefit of the company, unless payment be forthwith made, with interest from the date of the calls.
As considerable sums have been received without being accompanied by the shares, for the purpose of having the payment noted, the proprietors are requested to send them in without delay.
By order of the board,
K. MACKENZIE, Secretary. 32

Nos.	211 to 220	inclusive	Nos.	4531 to 4535	inclusive
,,	316 to 320	,,	,,	4571 to 4575	,,
,,	386 to 390	,,	,,	4581 to 4605	,,
,,	786 to 800	,,	,,	4606 to 4615	,,
,,	811 to 820	,,	,,	5391 to 5440	,,
,,	881 to 915	,,	,,	5491 to 5530	,,
,,	1091 to 1100	,,	,,	6461 to 6470	,,
,,	1111 to 1130	,,	,,	6811 to 6815	,,
,,	2556 to 2560	,,	,,	7041 to 7065	,,
,,	2736 to 2745	,,	,,	7066 to 7075	,,
,,	2921 to 2950	,,	,,	7606 to 7620	,,
,,	3231 to 3240	,,	,,	7646 to 7650	,,
,,	3361 to 3560	,,	,,	7886 to 7900	,,
,,	3661 to 3760	,,	,,	8451 to 8455	,,
,,	3866 to 3885	,,	,,	8476 to 8550	,,
,,	4221 to 4230	,,	,,	8816 to 8825	,,
,,	4281 to 4360	,,	,,	8856 to 8885	,,

POLKINGHORNE'S PATENT METHOD OF TREATING TIN ORES.
Messrs. POLKINGHORNE & CO. beg to acquaint ADVENTURERS, and OTHERS interested, in TIN MINES, that they have just obtained HER MAJESTY'S LETTERS PATENT for the SOLE USE of a COMPOUND SOLUTION, effectually to CLEANSE TIN ORE from all extraneous metals—thereby increasing its value from £2 to £4 per ton.
Messrs. P. and Co. are NOW READY to SUPPLY the article from their manufactory, *COPPERHOUSE, HAYLE, CORNWALL,* 33
in casks of 10 gallons each, which quantity is sufficient for a ton of ore.—Price 10s. per cask, and license 5s. per ton of ore.—N.B. Every information can be obtained by applying at the patentee's offices, 12, Clement's-lane, London.—April 4, 1846.

STEAM COAL—WITHOUT SMOKE, as per experiments made at her Majesty's Dockyard, Woolwich.
CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.)
OFFICES—2, MOORGATE-STREET, LONDON. 34
The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.
References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London. 35

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis. 36

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....London Cemetery Company—Radley's Hotel, Blackfriars, at twelve.
London Parcels Delivery Company—offices, at one.
TUESDAY.....Great Luxembourg Company—London Tavern, at one.
St. Katherine Docks Company—offices, at one.
WEDNESDAY...Mutual Life Assurance Society—King's Head Tavern, at twelve.
THURSDAY....London Joint Stock Bank—offices, eleven for twelve.
Direct Western Railway—King's Head, Poultry, at eleven for twelve.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

COLONIAL BANK.

The half-yearly general meeting of proprietors of this establishment, formed many years since to extend banking facilities in the West Indies, was held at the London Tavern, on Tuesday, the 7th inst. ;—J. IRVING, Esq., in the chair.

The CHIEF ACCOUNTANT (Mr. Wight) read the advertisement convening the meeting.

The CHAIRMAN said, this was a half-yearly general meeting, convened pursuant to the terms of the charter. He had to regret the absence of Mr. Colville, the chairman of the corporation, who was unable to attend, in consequence of a domestic affliction. However, the task he (the chairman) had to perform was easy, as the report the court of directors had to present was a most satisfactory one. There had been a decided improvement in the business of the bank in the various colonies—and that, too, without any dangerous or high-pressure competition with rival establishments. By a continuance of cautious management, no doubt could be entertained that the profits of the corporation would be steadily increased. The report of the directors would now be read.

The CHIEF ACCOUNTANT then read the following report :—

In compliance with the requisitions of the charter, the directors submit to the proprietors the customary statement of the debts and assets of the corporation, made up on the present occasion to the 31st December, 1845, which also exhibits the amount of profits made by the bank during the half-year ending at that period—viz. :

DEBTS.

Circulation	£221,654	14	2
Deposits and other liabilities	786,467	13	4
Paid-up capital	500,000	0	0
Profit	18,982	8	3
Total	£1,527,104	15	9

ASSETS.

Specie	£277,926	9	2
Due to the bank on the colonies, on bills discounted and purchased, including those part due, but reported good	692,684	8	8
Due to the bank in the colonies on cash credits and current accounts, reported good	132,160	17	10
Due to the bank in London, on bills remitted, cash at bankers, &c.	336,561	8	10
Balance of bad and doubtful debts	62,105	4	1
Bank premises and furniture in London and the colonies	22,160	8	7
Balance of preliminary expenses	3,505	18	7
Total	£1,527,104	15	9

The reports of the colonial managers on bad and doubtful debts, down to December 31, as compared with those to June 30, exhibit an increase in the amount, as will be seen from the following statement—viz. :

Increase on bills, bad and doubtful	£1012	8	1
Ditto on cash credits and current accounts, ditto	516	19	8
Total	£1,529	7	9

Balance of bad and doubtful debts, as per last report	£71,481	16	2		
Deduct undivided profit for half-year ending June 30, 1845	10,905	19	10	60,575	16	4
Balance as above				£62,105	4	1

It occasions the directors regret to have to report the above increase, in old, bad, and doubtful debts; but it is satisfactory, at the same time, to be able to state, that no new bad or doubtful debts have been made. It is also gratifying to them to lay before the proprietors a statement, exhibiting not only an enlarged amount of profit, compared with that of the preceding six months, but a considerable increase upon that of the corresponding half-year of 1845. Considering this improved state of the bank's business, the directors are of opinion, they are now justified in proposing an increased dividend; they, consequently, recommend that, from the amount of profit made during the half-year ending 31st December, 1845, after deducting all current expenses—viz. : £18,982 8 3
Less half-yearly proportion of preliminary expenses 1,000 0 0

Or	£17,982	8	3
A dividend of 1½ per cent. be declared for the half-year ending Dec. 31, 1845, being at the rate of 3 per cent. per annum on the paid-up capital of the corporation, which will require	7,500	0	0
Leaving a sum of	£10,482	8	3

to be carried to the credit of bad and doubtful debts' account, which will reduce the balance to 51,622*l.* 15s. 10d. Notwithstanding the long-continued drought by which the colonies had been visited, the business of the half-year just ended was going on satisfactorily at the date of the latest accounts in possession of the directors.

The report was adopted, and the dividend for the half-year (free of income tax) of 1½ per cent., or at the rate of 3 per cent. per annum, agreed to.

SIR GEO. CARROLL considered the report that had just been read to be most satisfactory. The proprietors ought to thank the directors for their exertions and the desire shown by them to get out of debt, when the proprietors might calculate on an increase of their dividends. He moved a vote of thanks to the chairman and directors, for their zeal and attention to the affairs of the bank.—Carried unanimously.—The CHAIRMAN briefly returned acknowledgments, and the court was then adjourned.

THE UNION BANK OF LONDON.

The seventh general meeting of the proprietors of this company was held at their banking-house, Princes-street, Mansion-house, on Wednesday, the 8th inst., to receive the annual report and declare a dividend,

Sir PETER LAURIE (Alderman), Governor, in the chair.

The advertisement calling the meeting, and the minutes of the last, having been read, the SECRETARY proceeded to read the following report and accounts :

REPORT.

In submitting their seventh annual report of the affairs of the bank, the directors have the pleasure of stating that the extension of the business continues to be highly satisfactory. The directors have declared a dividend, at the rate of 5 per cent. per annum, clear of income tax, upon the paid-up capital of the company, for the past year.

The profits of the year, after defraying all the current expenses, and making the most ample provision for all bad and doubtful debts, and the payment of 28, 108*l.* 16s. to customers for interest on their current and deposit accounts, amount to 29,181*l.* 6d. 10d. After providing for the dividend (amounting to 21,146*l.*), and appropriating 500*l.* as usual in reduction of the preliminary expenses, there will remain a surplus profit of 7536*l.* 6s. 10d. of which sum the directors have added 2000*l.* to the reserved fund (now amounting to above 22,000*l.*, invested in Government securities), leaving an unappropriated surplus profit of 5536*l.* 6s. 10d. In conformity with the provisions of the Deed of Settlement, the following directors retire from office—viz : Major-General Robertson ; Archibald Cockburn, Esq. ; Benjamin Boyd, Esq. Major-General Robertson and Archibald Cockburn, Esq., being eligible, offer themselves, and are recommended by the directors, for re-election ; and the directors have received notice from Charles Lyall, Esq., of No. 33, Westbourne Terrace, Hyde Park, a duly qualified proprietor, of his intention of becoming a candidate for the office of director, at this meeting.

The Union Bank of London, June 30, 1846.

Dr. LIABILITIES. *Cr.*

Paid-up capital, 10*l.* per share, on 42,290 shares	£422,900	0	0
Due by the bank on current accounts, deposit receipts (including interest accrued), circular notes, &c.	2,170,310	4	8
Reserved fund, invested in 3 per Cent. Consols, as per contra	20,303	4	11
	£2,613,513	9	7
Surplus profit	29,181	6	10
Total	£2,642,694	16	5

ASSETS.

Cash in the bank, in the Bank of England, loans, Exchequer Bills, and other Government securities, bills discounted, &c.	£2,543,143	19	1
£21,165 3 per Cent. Consols (reserved fund)	20,303	4	11
Bank premises, consisting of freehold buildings in Princes-street, Mansion-house, and Argyll-place, and purchase of lease and fixtures of premises, 4, Pall Mall East	55,675	2	5
Preliminary expenses	18,000	0	0
Half-year's dividend, to 31st Dec., 1845, amount carried forward	10,572	10	0
Total	£2,642,694	16	5

Appropriation of the Surplus.

Dividend, 5 per cent. on paid-up capital—viz. :						
Half-year, to 31st Dec. 1845, already paid	£10,572	10	0			
Half-year, to 30th June, 1846, now declared	10,572	10	0	£21,145	0	0
Addition to the reserved fund				2,000	0	0
Proportion of preliminary expenses				500	0	0
Undivided profit—carried to profit and loss new account				5,536	6	10
Total				£29,181	6	10

Profit, as above, after deducting all expenses paid or due, and interest (28,108*l.* 16s.) allowed to customers on their current and deposit acct.. £29,181 6 10

In answer to various questions put by different proprietors, the CHAIRMAN stated, that the sum of 2,543,143*l.*, as given in the assets of the bank, did not include any bad or doubtful debt, but consisted of *bonâ fide* securities—of the substantiality of which the directors had not the slightest doubt. The losses which the bank was rumoured to have sustained by Emanuel's bankruptcy, at one of their west-end branches, were greatly exaggerated; and on many of the bills supposed to be a total loss, the money would be recovered, because there were other names on them besides the bankrupt's. The manager of the branch where these bills had been discounted, had in no way lost the confidence of the directors; for, although he had acted with rather too liberal a spirit towards persons who turned out not to have deserved it, the parties stood so high at the time that no bank in the metropolis would have refused their securities, and this manager had on all other occasions evinced the utmost zeal, activity, and caution, in the interests of the bank: 452 new current accounts had been opened in the bank in the past year; and the whole of their losses by bad and doubtful debts, including the Emanuel's, did not exceed 20,000*l.*

Mr. HODGES asked, if one of the directors had not been a bankrupt?—The CHAIRMAN replied, that no director had been a bankrupt, nor would he sit at the board with any who had.—Mr. HODGES said he meant Mr. Spottiswoode, the deputy-governor, whose name had been so mixed up in the public papers with so many railroads.—The CHAIRMAN said, he had only to repeat, that no gentleman on the direction had been a bankrupt.

Mr. YOOL said, that it must be highly detrimental to the interests of a banking concern, to have the name of Mr. Spottiswoode as its deputy-governor. He had no personal feeling towards Mr. Spottiswoode, but, upon public grounds, he considered him an unfit person to be connected with the management of a bank.

Mr. SPOTTISWOODE rose and said, that he thought it most unjust and unwarrantable in any gentleman to come there, and allege that he (Mr. Spottiswoode) had been a bankrupt, without taking the trouble of inquiring whether or not the allegation was true. If he had been a bankrupt, the whole world must know it, and the means of ascertaining the fact was within reach of every man; and was it not, then, most unfair and cruel to make such a public assertion of any man without inquiry? He had never been a bankrupt, and had paid every shilling he owed to any man. As to his being connected with railroads, it was true he had been so; and there was not one line, with which he had been connected, that would not have been a prosperous one if carried out; but scripholders and allottees found it convenient to back out, and thus render success impossible. He did not see that [illegible] any crime to be a director of a railroad any more than a bank; and as to the many groundless rumours about him, he could confidently say, that he had not lost anything by his connection with railroads. He had been of some service to this bank, and he should continue to serve it; for he should not give countenance to the many false reports that had gone abroad respecting him, by resigning his seat at the board, as had been suggested. Had he been as successful as Mr. Hudson in his connection with railroads, he never should have heard any complaint against him for that connection.

Mr. YOOL said, that after the explanation which Mr. Spottiswoode had given, he should retract what he had said, and drop the matter altogether. It was not from any personal feeling he had spoken.

Mr. HODGES also expressed his regret at the error into which he had fallen, and assured Mr. Spottiswoode that he had no personal feeling towards him, and the matter then dropped.—A dividend of 5 per cent. having been declared, three vacancies in the direction were filled up; after which, thanks were voted to the board of directors, the manager, branch-managers, and secretary, and the meeting broke up, highly pleased and satisfied with the condition of the bank, its past prosperity, and future prospects.

ARMAGH, COLERAINE, AND BELFAST RAILWAY.

A meeting of the shareholders of this company was held at the office of Mr. Phillips, solicitor, Lawrence Pountney-lane, on Tuesday, the 7th inst., in order that a report might be presented to them from a committee appointed to wait on the directors. The meeting was numerously attended.

Mr. CARTER, having been called to the chair, opened the business by stating that this was an adjourned meeting from the 23d of June, when a committee had been appointed to wait on the directors for some explanations relative to their conduct, as holders of their (the shareholders') money. Applications had been made to them, and he (the chairman) regretted to say, that the answers had been anything but satisfactory. Before the report was read, the minutes of the last meeting would be read.

Mr. PHILLIPS then read the minutes of the last meeting, from which it appeared that those then present had resolved to demand back from the directors the whole deposit of 1*l.* 7s. 6d. per share. He then read the report.—This document stated, that acting on the resolutions, the committee had made application to the directors on the 24th of June for a return of 1*l.* 7s. 6d., to which the solicitor to the company had returned two letters, the first of them being as follows :—"In reply to your letter to directors, I beg to say, I shall bring the same before them at the next meeting." (A laugh). This, however, (says the report), did not say when the meeting would take place, and a subsequent one was equally vague and unsatisfactory. It stated that "explanations" would be made to a future meeting, which they believed would be "satisfactory." After this (continues the report) the committee think it right to communicate no more with the directors, and recommend the demand of the whole return of deposits. The report having been read,—

The CHAIRMAN said, that nothing could be more unsatisfactory in his opinion than the results of the negotiations. He considered their position one of jeapardy; and there was a doubt whether they would have any of their money back, unless they took active measures. In his opinion, the directors were bound to return them the full amount. It remained for shareholders present to decide, whether they would allow the directors something—200*l.* or 300*l.*—towards paying the expenses. He (the chairman) should be sorry to be harsh or severe, if they could prove that they had done their best to benefit the shareholders; but if they found, as he had reason to believe they would, that they had not done so, then he thought they were right in demanding back every shilling. Having thus stated his views on the subject, he was anxious to hear those of any gentleman present.

A SHAREHOLDER thought it was high time that they should hear something of the affairs of the company. What had been done with the money, and how had the amalgamation been brought about. (Hear.)

The CHAIRMAN could give no information on the subject; it was not to be got at. (Hear). The secretary to the company was present, and ought to do so.

Mr. PEACOCK believed that there had been 23,000*l.* paid originally.

Mr. GALT (secretary to the company) then addressed the meeting. He was here merely as a private individual; but still he thought it desirable that, as far as he could, he should tell them the real position of the company. Some weeks ago, he had been surprised to see an advertisement, signed by a Mr. Phillips—(laugh)—in no way connected with the company—(hear)—convening a meeting; and he (Mr. Galt) had been the more surprised at it, as, up to that time, no complaint had been sent to the directors. (Hear). That meeting, so far from being a properly convened one, had nothing to do with them.

The CHAIRMAN: I beg to differ from you. (Uproar, and cries of order). I must insist on your speaking to the point. (Renewed uproar).

Mr. GALT continued: He would not answer all questions put now, because at a proper meeting, in the usual time, which would take place when the bill had been passed by the House of Commons or otherwise, all information would be given. (Hear). He did not choose to enter into it now, at a meeting got up as a job.

Here a noisy scene occurred, Mr. Phillips remonstrating indignantly with Mr. Galt for using insulting language, and the shareholders keeping up an orchestral accompaniment of groans and uproar. Mr. GALT would defer making any further remarks until some resolution were brought forward.

Mr. LEYMER (of the committee) condemned the amalgamation with the Dublin, Belfast, and Coleraine Company. It had not been brought forward till after their (the present company's) scheme. The directors had thought proper to amalgamate with that company, which had been always opposed to them. Its shares had been down in the market to 7s. 6d. The amalgamation had been unfair altogether, as the advantages had been on their side, and the directors had thought proper to make the absurd union without the consent of their shareholders. Such being the case, he (Mr. Leymer) would propose as a resolution—"That the directors having failed to carry out their scheme, having amalgamated with and transferred their funds to another scheme without the consent of the shareholders, it was resolved, that the amount of the deposits be required of them, and that in default of payment proceedings be taken for the recovery of them." Would any one second this resolution?—After a pause the resolution was seconded by Mr. HOOPER (as he expressed it), because it was going begging; and a lengthy and disorderly discussion ensued.

Mr. GALT: The fact of there being so much difficulty in getting a seconder to their resolution, showed the imprudence of the course taken at the last meeting. Though the present one was not legally binding, he (Mr. Galt) would be sorry if any one went away without being satisfied of the position in which they stood, and with the means which had been taken with regard to the bill. The committee were ignorant of these matters. (Laughter.) The chairman himself had not subscribed the deed, but had bought scrip. If he would have faith, he would be paid four-fold for his money. (Hear). One of the committee had stated, that the present company started before the Dublin, Belfast, and Coleraine. So far from that it was not registered till five months after.

Mr. LEYMER explained, that he had drawn the inference from the advertisements.—Mr. GALT was speaking from official documents. (Hear). It had been stated, that the line had been virtually abandoned. Now, the prospectus had stated, that the bill was to form a railway from Armagh to Portrush. The bill now before Parliament was just the same—by the same route—touching the same towns—and beginning and ending at the same places! So far from being abandoned, nothing had been altered but the name. The projectors of the company, when the scheme commenced, took care to provide for any union with any other company, and even for the alteration of the name, should it be necessary. If Mr. Phillips wanted to complain of the directors, he should have done so to them, and heard their explanation—not called a meeting.

Mr. PHILLIPS: You know I called on you to do so.—Mr. GALT: I have never seen your face before. (Confusion).—Mr. PHILLIPS: I left my card (Roars of laughter).—Mr. GALT, in continuation: That was hardly sufficient. (Laughter.) The directors were armed with full powers to make the amalgamation. They had no interest separate from the shareholders, and had no wish to act contrary to them; and, therefore, a meeting would, as soon as possible, be called regularly—not a got up one—when every shareholder would be able to express his sentiments. (Hear). He (Mr. Galt) was anxious that those present should be favourable to the directors; and, to ascertain them now, he would propose an amendment, not pledging gentlemen present to anything, but recommending an adjournment till the directors could call a proper legal meeting. (He then read the amendment, which contained a statement to the effect "that nothing had occurred to shake the confidence of the shareholders in the directors' management of the affairs.")

Mr. PHILLIPS thought no such thing could be carried, until they knew something of the accounts. Several shareholders wished information as to the funds of the company, &c., which, however, Mr. Galt not being there officially, could not give. A discussion too desultory, as well as long, to be reported in detail, then took place, on the steps to be taken. Those present, though more favourable to the directors than the feeling at the last meeting, seemed to demur to giving the expression of confidence implied in the amendment of Mr. Galt, whom, however, they thanked for the part he had taken on the present occasion.

Finally, it being understood on the authority of that gentleman, that a meeting would shortly be called by the directors, a resolution was passed, that the present one should be adjourned for a month, and this it accordingly did, after lasting two hours, a vote of thanks having been given to the chairman.

HALLETTE'S ATMOSPHERIC RAILWAY COMPANY.

An extraordinary general meeting of the shareholders of Hallette's Atmospheric Railway and Canal Propulsion Company, was held at their offices, Winchester House, on Thursday, the 9th instant.

Mr. BRIGHTMAN in the chair.

The meeting was well attended. The directors' report showed that they had secured M. Hallette's patents, for the use of which they were now ready to grant licenses to railway companies and proprietors of mines; and that the working model, recently exhibited at Peckham, had been visited by a great many eminent engineers (amongst whom were Messrs. Brunel, Vignoles, and R. Stephenson), and scientific persons, and that the universal opinion was highly favourable to the successful application of Hallette's atmospheric system to railway traffic. The report stated that the directors were at this moment in communication with several railway companies, and that they anticipated favourable results, and the profitable operation of the patents at no distant period. It also appears that this system, in addition to its being the most simple and perfect, presents the following advantages—viz. : a longitudinal valve, hermetically air-tight; no sensible leakage during the transit of a train; absence of grease, or composition, in the valve; a great comparative saving in the expense of working, over every other atmospheric system; a diminution of expense in the purchase of land and earthworks—tunnels scarcely ever being requisite; considerable reduction in the weight of the rails, which are now made of strength proportioned to the weight of the locomotive engine; frequent departures; increase of speed; less oscillation, absence of noise, heat, ashes, and smoke; no possibility of collision; complete safety to the traveller; no accident by fire to person or property, nor from the bursting of boilers, or failure of other parts of the locomotive engine; cheapness in working over the locomotive, &c., &c. The report further stated, that M. Hallette's invention was highly important to mines, as an economical, safe, and rapid mode of bringing minerals to the surface, and as affording ready means of ascent and descent to miners, horses, and all kinds of implements—whilst the two columns of the propulsion tube would keep up constant currents of air from the underground works to the atmosphere at the surface.

The report gave general satisfaction to the meeting, and was, by resolution, adopted unanimously.—A vote of thanks was passed to the chairman and directors, and the meeting separated.

EUROPEAN RAILWAY PROGRESS.

Steam communication, it has been said, is as remarkable an achievement of the 19th century as the invention of the art of printing, and the discovery of the new world, were of the 15th. It is impossible, at the present moment, to calculate, with any degree of certainty, what may be the ultimate consequences of the application of this wondrous power to railways; nor is it easy to form even a slight idea of the gradual transformations and changes which this new species of communication is daily working on the intellectual and moral condition of society. The results hitherto evinced, would seem to justify an anticipation of popular improvement of the widest and most cheering character.—Modern times have witnessed no institution more essentially democratic in its character—no institution which promises more for the diffusion of useful knowledge, and which bids fairer to place the members of the general human family in their appropriate positions with respect to each other. It is destined to establish a more intimate connection between individuals and nations than has ever hitherto been maintained. The knowledge thus acquired with respect to mutual habits and reciprocal motives, will yet displace many of those old feelings of prejudice, which, conceived in ignorance, have at all periods been the chief origin of war and bloodshed. To the politician and the philanthropist, no study can afford a wider field for thought and reflection, than that to which we now refer. At the close of the year 1845, there were 16,400 kilometres (or nearly 9900 miles) of railway open to passengers in Europe and the United States of America. The cost of their construction amounted to the sum of 3,937,000,000 f., or 157,480,000*l.* sterling. The expense of a kilometre (rather more than half a mile English) of railway, may be, consequently, estimated at an average of 244,754 f.; and, if we calculate the amount of population in the two quarters of the globe just named at 234,000,000 f., we shall find that a capital of 19 f. 55 c. for each individual has been already expended towards railway construction. The capital, however, laid out in constructing this distance of railway varies, per each individual, according to the advancement which any particular country may have made in adopting this mode of conveyance. In Belgium, it may be stated at about 30 f. 10 c. each individual; in England, 74 f. (2*l.* 19s. 2d. sterling); in Holland, 10 f. 85 c.; in Germany, 8 f.; in the United States, 49 f. 57 c.; in France, 9 f. 70 c.; in Germany, Italy, Cuba, and Russia in Europe, where railways have as yet made no considerable advance, at an average of 3 f. 67 c. If we wish to arrive at the comparative costs of railway construction in different countries, estimating such cost per kilometre, we shall find it to be in Belgium, 261,000 f.; in Great Britain, 550,000 f.; in Holland, 210,000 f.; in Germany, 160,000 f.; in the United States, 118,000 f.; in France, 335,000 f.; in Denmark, 148,000 f.; in Italy, 200,000 f.; in Cuba, 190,000 f.; and in Russia, 280,000 f.

The following is a table showing the total expense of railway construction in the countries just named, up to the close of the year 1845 ;—

Belgium	Kil. 559	Fr. 145,984,014
England	3638	2,000,000,000
Holland	154	33,340,000
Germany	3140	502,400,000
United States	7500	846,075,000
France	986	330,000,000
Denmark	106	12,508,000
Italy	228	45,782,000
Cuba	37	7,030,000
Russia	52	14,560,000
Total	kilometres 16,400	3,936,969,414 francs.

The improvements which have gradually taken place in the speed of locomotives since their first application to road travelling, have been very remarkable. In 1824, the first locomotives in England, with a 40-tons power, travelled at the rate of only 10 kilometres per hour (6 English miles). So great was the improvement in a few years, that, in 1829, the Rocket travelled at the rate of 25 kilometres per hour (15 English miles); in 1834, the speed of the Firefly was 34 kilometres per hour (20 English miles); in 1839, the North Star moved with a celerity of 62 kilometres per hour (37 English miles); and at the present moment, locomotives have arrived at a speed of 70 kilometres per hour (42 English miles). During the same period (since 1825) the quantity of fuel required for the propulsion of locomotives was diminished five-sixths—that is, six tons of coal were consumed formerly for one at the present moment.

The mean speed upon several of the principal English lines is as follows :—Upon the North Midland, and Eastern Counties, 58 kilometres per hour (33 English miles); upon the Great Western, 53 kilometres (31 English miles); upon the London and Birmingham line, 43 kilometres (25 English miles); upon the Manchester and Leeds, 39 kilometres (24½ English miles); and upon that of Birmingham and Gloucester, 38 kilometres, (24 English miles).

SALE OF SILVER.—The silver imported by the last West India steamer, being about 2,000,000 Spanish dollars, has been purchased by Messrs. Rothschild, at 4s. 9½d. per ounce.

SUBMARINE VESSEL.—Some experiments have been, of late, made with a boat, constructed after a plan of Dr. Payerne, and called by him *bateaû cloche* (bell-ship). It is made of iron, and to be seen near the Pont Royal at Paris, where it is now moored. On its last experimental trip, 11 persons were on board, and the craft passed (invisible to the public) through the space between the Pont Royal and that of La Concorde. None of the passengers felt the least inconvenience, although there was a sort of telegraph established for communicating with those above water.

THE ICE TRADE.—This is one of the most curious branches of modern commerce. A portion of the foreign ice consumed in London is imported from the north of Europe, but much of it comes from the United States of America. The principal locality for cutting ice in that country is the Wenham Lake, near Boston, and there are in Boston 16 companies engaged in transporting ice to the East and West Indies, New Orleans, South America, and Europe. The quantity exported from Boston in February, 1845, was 3815 tons, and the total export of the previous eight months 21,852 tons, making the whole quantity exported, from June, 1844, to February, 1845, 25,667 tons. Since that time the quantity has been greatly increased.

A GENTLEMAN EIGHTY YEARS OF AGE CURED OF A VERY BAD LEG BY HOLLOWAY'S PILLS AND OINTMENT.—Mr. Richard Stoper, residing at Saxmundham, Suffolk, had a bad leg, which he was apprehensive would cost him his life. Although attended by an eminent surgeon, yet the danger became so great that it was deemed necessary to use Holloway's Pills and Ointment, under the surgeon's inspection. By those celebrated remedies alone a perfect cure was effected in a few weeks. The age of this gentleman makes the cure most extraordinary; but he is well known, and the fact may be inquired into, as he is even now a clerk to the commissioners of taxes. These medicines are sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

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Transactions of Scientific Bodies.

INSTITUTION OF CIVIL ENGINEERS.

The second of the series of *conversazioni* given by Sir John Rennie, President of the Institution of Civil Engineers, to the members and his friends, was held on Saturday evening, and was numerously and brilliantly attended. The principal additions to the collection of models and specimens described last week, were Prosser's ingenious method of fixing the tubes in locomotive boilers, by means of expanding washers; the arrangements of the direct action marine engines for her Majesty's frigate, *Sampson*, by Messrs. Rennie, which appeared to attract the particular attention of the naval men present; and Hurwood's improvements in the construction of house windows and ship lights. There were some excellent specimens of the Patent Wood Carving Company's productions, and two pieces of Brett's improved bituminous incorrodible pipes, with screw joints, which have been recently so extensively used in Paris.

JUNE 9, 16, and 23.—Sir JOHN RENNIE (President) in the chair.

The discussion upon the paper by Mr. Harding, on "the Resistance to Railway Trains at various Velocities," was continued throughout the two former of these evenings, and assumed so wide a field, that it would be difficult, in our limits, and without the aid of diagrams, to give an adequate idea of the opinions of the several speakers.

The chief point in discussion, was the statement by one party, that the resistance to a passenger train, weighing about 30 tons, at a velocity of 60 miles per hour, would be upwards of 50 lbs. per ton; whilst it was contended by another party, that it had been demonstrated to be not more than 18 lbs. per ton. This latter assumption was, however, qualified by a statement, that although such a result had been obtained under particular circumstances, and had elsewhere been used as the basis of an argument in the examination into the merits of the broad and narrow gauges, yet it was not meant to contend for its absolute accuracy under all circumstances. The experiments by the committee appointed by the British Association, and those by Mr. Scott Russell and by Mr. Stephenson, were adduced on the other hand, as confirming, in a remarkable degree, the esults obtained by Mr. Harding, and given in the paper.

The resistance on railways being analysed, was contended to be composed of the friction of the wheels and axles, which remained constant at all velocities, and the frontage resistance, which increased as the square of the velocity. But there was also shown to exist a large remainder of resistance, which it was important to consider the constitution of. It appeared that this remainder increased in the direct ratio of the velocity, and not as the square. The term "concussion" had been used to designate this cause of the expenditure of power—as it was contended, that in the passage of a train, a motion resembling that of a wave was communicated to the comparatively inelastic earth. This vibratory action must be caused by an expenditure of power; and itwas contended, that the striking of the flangees of the wheels against the rails, the flexure of the light rails, insecure chains and fastenings, unstable sleepers, the action of the springs, and even the motion of the passengers in the carriages, all absorbed power causing resistance; and it was argued, that the remainder sought would be found in these circumstances, which had not been generally considered by experimenters. This element of resistance also increased directly as the velocity, and not as the square. The effect of the lateral resistance of even a light side-wind upon a long train, was shown to be excessive; and it was stated, that it had been given in evidence, that on several occasions seven engines had been required to arrive at a moderate speed, with a train of 100 tons in a gale of wind acting laterally.

The experiments on the resistance to trains descending inclined planes by their own gravity, as tried for the British Association, were quoted as being still the most conclusive on record. It was, however, shown that the atmospheric system afforded the best opportunity for testing absolutely the resistance—as by observing accurately the vacuum in front of the piston as shown by the barometer, and the velocity of the train, its positive weight being known, the air being presumed to enter behind the piston at the atmospheric pressure, and allowing 100 lbs. for the friction of the piston, a most perfect dynamometer existed and all the attendant circumstances being stated, accurate results might be arrived at; it was, therefore, suggested that, as such great discrepancy of opinion existed on the subject of resistance (varying between 18 lbs. and 72 lbs. per ton), an application should be made by the institution to the Croydon Railway Company, for permission to try a series of experiments to settle the question on certain bases; and that this investigation should be restricted simply to the scientific inquiries as to resistance, and not touching at all upon the commercial or the comparative value of the locomotive and atmospheric systems of traction—they being foreign to the views of the institution.

It appeared generally admitted, that the method of computing resistances from the quantity of water used as steam in a locomotive engine, drawing a certain load at a given speed, under a pressure indicated in the boiler, was liable to error, as so many circumstances must be taken into consideration. Indicator diagrams were exhibited and reasoned upon; but it was shown, that the present knowledge of the action of steam in the cylinder of a locomotive engine was very limited—and that no positive reliance could be placed on the results obtained, except as a check against error in the other and better methods of observation. Still the subject of the action of steam in a locomotive was one of such great interest, that its discussion must always lead to useful results. It was shown, that Mr. Hawksley's formula for computing the velocity of the passing of fluids in pipes, might be advantageously applied to this subject also; and by its application, he contended that a speed of 60 miles per hour could not be maintained upon a railway without great expense.

The first paper was a description, by Mr. Bidder, M. Inst. C.E., of his swing bridge, over the Wensum, at Norwich. The bridge was described as covering by two spaces, of 45 ft. each, 85 ft. of the river, and a portion of the land on the Norwich side. It was so constructed that, turning upon a centre piece, fixed upon piles, the two sides opened simultaneously—thus balancing each other, and giving great facility for opening and shutting it for the uses of the navigation and the railway traffic. The whole structure, the details of which were elaborately given, with the method of building, was of cast and wrought-iron; it weighed 347 tons, and was manufactured by Messrs. H. and M. O. Grissell, from Mr. Bidder's designs. The paper was illustrated by a very complete model presented by Messrs. Grissell, and by a beautiful set of drawing by Mr. Cheffins.

A paper was afterwards read, "On the Stability of Arches, with Practical Methods for determining the Proper Forms of their Sections," by G. Snell, Assoc. Inst. C.E. This paper consisted of four sections, with an appendix. The first section treated of the general conditions of stability in arches. The second discussed the conditions of stability of an arch composed of materials of infinite strength to resist compression; the arch being similar, and similarly loaded on either side, the crown and one of the points of rupture, being, therefore, assumed to be at the crown. The third section showed how the results of the investigations in the second section might be applied to actual practice, or to the call of an arch of limited strength to resist compression, which was actually the condition of the strongest material, and which greatly affected the results of the problems in the former section, based on the hypothetical condition of infinite strength of materials. This section showed how the form of section of an arch might be designed according to the strength of the material of which the arch was to be composed, but in this section, as in the second, the arch was supposed to be similar, and similarly loaded on either side the crown, and one point of rupture was assumed to be at the crown. The fourth section investigated the conditions of stability of an arch either similar or not similar, or similarly or not similarly loaded, on either side of the crown of the arch; and the various points of failure were determined, without the assumption of one of them. By means of this problem, the proper form of section might be designed for an arch, to be subjected to any number of pressures acting in any position and direction. Thus, the effect of men walking over a vaulted ceiling, or any other pressures in vertical directions, or the effect of the thrust of other arches, or of pressures in oblique directions, might be counteracted by the particular form of section arrived at by the application of the method described in this section. The author followed the principles of Professor Moseley, and applied them to the proof of an occulative process, which was advanced by MM. Lauri and Chapeyron, and proved by an abstruse method, requiring the aid of the infinitesimal analyses, on principles entirely different from those of Prof. Moseley. The investigations and problems in this paper did not require the application of algebraic analyses, either in their proof or practical application; no more than a knowledge of the first laws of statics, and the leading principles of geometry, was required, either to work the problems, or to undertake the reasoning on which they were founded. The appendix contained some observations on methods of finding the centres of gravity, without algebraic calculation, and the paper was illustrated by a complete series of diagrams, which rendered the problems very clear.

FORTH SILVER MINE QUARRY, LINLITHGOWSHIRE—MONSTER BLAST.—Mr. Robert Aitkin, the spirited tacksman of this quarry, on Tuesday, June 30, made preparations on a splendid scale, for charging and exploding a very heavy blast of rock. The depth of the bore was 26 ft. by 3 in. wide. When everything was ready, and the fusee ignited, allowing time to get to a respectable distance from the dangerous spot, there was but a very small report, with no concussion; the shot merely rending the rock, and making small fissures throughout the bed of stone. But, when the second charge, consisting of 656 lbs. of powder, was ignited, it was a sight worthy to behold; it shook the surrounding rocks with fearful violence, throwing solid blocks of stone, from a 100 to a 160 tons, to a good distance from their native bed. The two blasts are computed to have broken up about 8000 bolls of lime rock.

BRICKMAKING.—It seems by a Parliamentary paper, just issued, that in England and Wales, in the year ended the 5th of January, 1839, the number of bricks made was 1,427,472,282, on which the duty paid was 419,103*l.* 13s. 2d., whilst in Scotland in the same year the number was 27,411,493, and the duty 8112*l.* 2s. 3d. In the year ended on the 5th of January last the number made in England and Wales was 1,820,415,017, and the duty paid 558,323*l.* 2s. 4d., and in Scotland 57,321,716, and the duty 17,775*l.* 2s. 7d.

Mining Correspondence.

ENGLISH MINES.

BALLESWIDDEN.—The following are the particulars of the mine account, held on the 30th June, for March and April:—Amount of tin sold, 515*l.* 4s. 4d.; sundries received, 4*l.* 14s. 8d.—together, 5158*l.* 19s. To wages for March and April, 2840*l.* 18s. 7d.; sundry calls, 246*l.* 19s. 5d.; carriage, coals, timber, tin, &c., 100*l.* 15s. 11d.; merchants' bills, and lords' and bounder's dues, 1022*l.* 19s. 7d. —leaving balance in favour of adventurers of 947*l.* 5s. 6d.; from which a dividend of 8s. 6d. per share (690*l.* 4s.) has been declared, leaving balance in hand of 257*l.* 1s. 6d.

BARRISTOWN.—The 18 fm. level end west is considerably improved, producing at present over 3 tons per fm.; the 18 fm. level end east is producing rather less, about 1½ tons per fm. We still intersect branches in the 24 fm. level and cross-cut, mixed with lead. The lode in the adit end is still producing some ore, the lode about 18 in wide, very regular, composed principally of gossan. The following are our prices for July month:—Flat-rod shaft, 7*l.* per fm. (9 men); 18 fm. end west, 5*l.* per ton for ore, and 20s. per fm. (6 men); eastern end, 18 fm. level, 4*l.* per fm. (6 men); 18 fm. end west, from Dane's shaft, 5*l.* per fm. (6 men); 24 fm. level west, 4*l.* 10s. per fm. (6 men); 24 fm. cross-cut 4*l.* 10s. per fm. (4 men); adit end, 21s. per fm. (3 men); 24 cross-cut north 2*l.* per fm. (2 men); winze sinking under 12 fm. level, western end, 3*l.* 10s. per fm. (6 men); winze sinking under 18 fm. level, west of flat-rod shaft, 4*l.* 10s. per fm. (6 men); rise on course of lode, south of flat-rod shaft, 3*l.* per fm. (4 men); rise back 24 fm. cross-cut, south of engine shaft, 4*l.* 10s. per fm. (4 men). Tributers between 35 and 40 men, prices averaging 4*l* 12s. 6d. per ton. The flat-rods to Nangle's shaft will be at work some day next week. —THOMAS ANGOVE: July 4.

BEDFORD.—At Wheal Marquis, the lode in the 80 fm. level east is 2 feet wide, composed of spar, mundic, and ore, altogether more kindly. The lode in the 70 fm. level east is 2 ft. wide, producing saving work; and in the stopes, in the bottom of this level, the lode is still worth 20*l.* per fm. In the 58 fm. level east the lode is at present unproductive. At Ding Dong, the lode in the 24 fm. level west is 2½ ft. wide, composed of spar, peach, and tin. At Wh. Tavistock, the lode in the 47 fm. level east and west is 3 ft. wide, composed of capel, spar, mundic, and ore. The lode in the 35 fm. level east is 15 in. wide, producing good stones of ore. In the south engine-shaft the lode is upwards of 9 ft. wide, composed of iron, spar, and ore—a very strong kindly lode. The lode in the adit level is about 18 in. wide—gossan and spar.—J. PHILLIPS: July 7.

CALLINGTON.—Johnson's engine-shaft is 6½ fms. below the 112 fm. leve —Vivian's lode, so called, having a south underlie, is just gone through the shaft, making the same very wet and troublesome for sinking; driving north, at this level, we are opening tribute ground; in the south end the lode is producing silver-lead ores. In the 100 fm. level, driving south, we are opening ground that will set at 8*l.* in the 1*l.*; in the north end the lode has not been taken down. In the 90 fm. level north, the back we are leaving will set at one-third tribute; in the winze, sinking below this level, the ground is rather harder for sinking, the lode is producing good work. In the 80 fm. level we are opening tribute ground. At the north mine, in the 90 fm. level, driving south, the lode has not been taken down. In the 80 fm. level the lode is small, producing rich work for silver-lead ores. In the 70 fm. level the ground is favourable for cross-cutting towards the count-house shaft; the copper lode, at this level, driving east, is 10 in. big, with spots of ore; the ground is favourable for driving, intermixed with strings of mundic.—J. T. PHILLIPS: July 6.

CONSOLIDATED TRETOIL.—The lode in Henwood's shaft, sinking under the 70 fm. level, is 15 in. wide, producing good stones of ore; in the 70 fm. level, west of Henwood's shaft, the lode is 1 ft. wide, producing a little ore; in the rise, in the back of the 70 east, the lode is 18 in. wide, saving work. In the winze, coming down from the 60 on this rise, the lode is 18 in. wide, a good orey lode; in the winze, sinking below the 60 fm. level, west of Henwood's shaft, the lode is 20 in. wide, orey throughout; in the 60 fm. level, west of Williams's shaft, the lode is 1 ft. wide, opening ground for tribute. We have suspended this end, and have commenced a rise, which will ventilate the end, and also cut out ground for tribute. The lode in the 50 fm. level, east of John's shaft, is much as last reported; in the 50 fm. level, east of Henwood's shaft, the lode is 9 in. wide, opening tribute ground. Tregillas's lode, at the 40 fm. level, east of Russell's shaft, is 6 in. wide, producing a little ore.—July 7.

CRADDOCK MOOR.—In the past month the north shaft has been sunk 10½ ft., and the south shaft 11 ft. The present price for sinking is 25*l.* per fm. for the north, and 20*l.* for the south shaft; so you will perceive the ground is not quite so expensive for sinking as it has been—this alteration is occasioned principally in consequence of the lodes, containing a greater portion of gossan. In the south shaft the lode is composed of gossan and fluor, with good stones of copper ore; a few specimens we present herewith for your inspection, which are equal if not superior to any that have been found in the district at the same depth. The lode in the north shaft is about 10 in. wide, composed of fluor, gossan, and a small portion of ore—of a very promising character. The distance between the shafts is about 57 fms.; and there are two lodes situate 10 or 12 fms. north and south of the north shaft, and one 18 or 20 fms. north of the south shaft. These lodes, being situate so near each other, can be intersected at a comparatively small outlay.—J. NANCE.: June 24.

EAST TAMAR CONSOLS.—At Whitsun, in the 46 fm. level, south of Hitchins's shaft, the lode is small at present, but kindly; in the 46 fm. level, north of ditto, the lode is 20 in. wide, saving work. In the 36 fm. level, north of ditto, the lode is 2 ft. wide, looking very promising. At Furzehill, Harrison's shaft is cleared and secured under the 30 fm. level 10 ft.; the engine is working very well, so that we shall be able to make a speedy dispatch in getting the bottom of the old workings. In the 30 fm. level, south of Harrison's shaft, the lode is just the same as last week's report, very good. Our tribute department is looking very well. We have sampled, on Wednesday last, the 1st inst., 52 tons 10 cwts. silver-lead ore, which is now ready for sale.—B. ROBINS: July 6.

GREAT WHEAL MARTHA.—The lode in the 60 fm. level east, at the old mine, is 2 ft. wide, consisting of capel, spotted with mundic. At the new mine, the lode in the 20 fm. level west is split into two parts, and is, consequently, disordered for the present; the lode in the western end is 6 ft. wide, about 1½ ft. of which consists of mundic and yellow copper ore—a promising end. At the 10 fm. level west we have intersected another small felspathic cross vein, but the lode is large and regular on both sides of it, that of the western side especially, presenting very promising appearances, and containing good stones of ore; the pitch in the back of this level is being opened satisfactorily; the lode is producing a fair quantity of saving work, some of which is of good quality, and the indications are very good at the highest point yet attained. The new engine-shaft is sunk 11 fms. below the deep adit level, the men having completed their bargain, they have retaken to sink 10 fms. deeper for 170*l.*, cost of whim drawing, landing, &c., included; we adopted this plan to expedite sinking said shaft, being the most important point now in operation.—J. PRINCE; T. PENALUNA: July 4.

GUNNIS LAKE.—At Chilsworthy, Bailey's engine-shaft is 9 fms. 3 ft. under the adit level, the lode about 3 ft. wide, composed of gossan and spar. In the 10 fm. level, east and west of western shaft, the lode is about 2 ft. wide, composed of prian and spar, and producing stones of tin in places.—WILLIAM RICHARDS: July 7.

HANSON.—At Treza, in the 22 fm. level east the lode is 3 ft. wide, still improving—a branch of ore the whole height of the end, 9 in. wide, more than pay for driving. In the bottom of the 12 fm. level, east of engine-shaft, on counting lode, is a good branch of ore; but I am afraid, in consequence of the water, we shall not be able to do but little more in this bottom, until the 22 fm. level is driven 8 or 10 fms. further east, which will then be just under the bunch of ore we have on counting-lode; when the 22 fm. level is brought forth so far, we are hoping it will drain the bottom of the 12 fm. level dry from water; at the other two pitches, at same level, we hope the tributers are getting wages. —Z. WILLIAMS: July 6.

HARROWBARROW OLD MINE.—We have finished the work in the engine-shaft, and recommenced sinking. The 33 fm. level was driven last month 4 fms. 3 ft. 4 in.; this end is producing good stones of copper ore, and still improving. The Goodluck shaft has been sunk during the last month 4 fms. 4 ft. 9 in., ground favourable for sinking, and hope to hole the same to deep adit this month; the tin lode, in this adit, is about 4 ft. wide, half of which is very good work, containing branches 4 in. wide, producing one-fourth white tin—the remainder of this lode, although hard, produces a good vein of tin. I have run down a few ounces, and sent the lumps to the purser, where they may be seen, and in two months from this time we shall be in a situation to raise large quantities.—B. COOKE: July 8.

HARROWBARROW CONSOLS.—Brewer's shaft is sunk about 11 fathoms under the deep adit, the lode is about 1½ ft. wide, producing good stones of copper ore, ground favourable for sinking. The two captains (Messrs. Edwards and Rodda) who were called in to decide what compensation was to be paid to Harrowbarrow Old Mine, for draining the water from Brewer's shaft, have awarded 7*l.* per month.—B. COOKE: July 7.

HAWKMOOR.—The lode in the 15 fathom level, east of Hitchins's shaft, is about 2 ft. wide, composed of capel, spar, and mundic, with good stones of ore in places.—P. RICHARDS: July 7.

HOLMBUSH.—I beg to inform you the 80-in. cylinder-engine is keeping the water in fork, by going six strokes per minute, and is working remarkably well, so that no hinderments have yet taken place. The ground in Hitchins's shaft, towards the western end, is favourable for sinking, but the eastern end is not so favourable, being a mixture of ironstone and killas; we have set it to sink at 36*l.* per fm. The cross-course at the 120 fm. level, west of Hitchins's shaft, is not so hard for driving through, being set at 12*l.* per fm. In the 100 fm. level north the lead lode is 4 ft. wide, composed of flookan, prian, and occasional stones of lead; we have driven 4½ fms. north of copper lode, in the 100 fm. level, west of Hitchins's shaft, on the north part the lode is 14 in. wide, composed of mundic, spar, and stones of ore; we have set a winze to sink below this level by six men on this part, in order to communicate with the 110, now driving north on the lead lode; in the 100 fm. level, west of lead lode, on the south part the lode is 15 in. wide, composed of capel, mundic, and spots of ore; at this level, driving south, the lead lode is 3 ft. wide, composed of spar, prian, flookan, and stones of lead; we have set a pitch to three men in the back of this level, at 5*a.* in the 1*l.*, on the value of the lead; in the same level, driving north, the lead lode is 2 ft. wide, producing stones of lead occasionally, there being no regular bunch of it. In the 90 fm. level, west of Hitchins's shaft, on the north part, the lode is 15 in. wide, composed of spar, mundic, and stones of ore. The ground in the rise, in the back of the 80 fm. level, is hard, being set at 10*l.* 10s. per fm. In the 62 fm. level south the lead lode is 2½ ft. wide, composed of flookan, spar, and spots of lead, ground favourable for driving, being set at 2*l.* 10s. per fm.—W. LEAN; July 7.

LEWIS.—We beg to hand you our report of the above mines. In Wh. Nutt engine-shaft, the lode in the 60 fm. level end east is 18 in. wide, producing some tin, much improved since our last report; the 60 fm. level west has not been driven since our last report, in consequence of the men being put to raise against the shaft, to hole from the 50 to the 60 fm. level. The lode in the 50 fm. level end east is 2½ feet wide, worth 40*s.* per fm. for tin.; the lode in the 50 west is 2 feet wide, yielding some tin, and spots of yellow ore—a promising lode. The lode in the 40 fm. level end west is 4 ft. wide, worth 40*s.* per fm. for copper ore; the lode in the 40 fm. level end east is 15 in. wide, worth 40*s.* per fm. for tin. The lode in the 30 east is 2 ft. wide, yielding some tin; the lode in the 30 west is 2 ft. wide, worth 30*s.* per fm. for tin; the south branch at this level is driving west at 5*s.* per fm., and 10*s.* in the 20*s.*, for saving the tin—a very promising branch. The lode in the 20 fm. level end west is 2½ ft. wide, worth 30*s.* per fm. for tin; at the same level, Scadden's lode, or north branch, west of the cross-cut, is 8 in. wide, producing some good quality yellow ore. We are still continuing to drive the cross-cut north at this level, to cut our north lode in Bush shaft; we are also clearing a shaft on Bosworgin Town lode, where we have this day discovered a promising lode 2 ft. wide, with some good quality tin stuff in it; this lode is about 100 fms. south of our present workings. We are also clearing Bush shaft on our north lode in Trevean-field, on the old men's workings, where we found a very promising lode, 18 in. wide, producing some tin.—S. S. NOELL: July 4.

TAMAR SILVER-LEAD.—The engine-shaft is down 10 fms. 4 ft. below the 145 fm. level; we intend to sink another 5 fms. to put her down to the 160, as we think it will be advantageous to have a 15 fm. back at this level; in the 145 fm. level the lode is 1 ft. wide, composed of capel and ore, saving work, but not rich. In the 135 fm. level the lode is 18 in. wide, work of a good quality; in the winze, in the bottom of the 135 fm. level, north of the shaft, the lode is 2½ ft. wide, producing good stones of ore. In the 125 fm. level the lode is 3 ft. wide, 1 ft. of which is good saving work. In the 115 fm. level the lode is 6 in. wide, composed of can and ore. In the 105 fm. level the lode is 1 ft. wide, at present poor. We sampled on Friday, the 3d inst., computed 86 tons of rich silver-lead ores. At North Tamar, in the 60 fm. level, the lode is 18 in. wide, —capel and can, interpersed with silver-lead ores.—J. SPRAGUE: July 6.

TAVY CONSOLS.—At Hocklake, the lode in the adit end is widening as we leave the cross-course west, and continues to produce good saving work; the lead lode, in the south end, is still yielding good work, the branch of lead is about 3 in. wide, the lode is 3 ft. wide, composed of flookan and carbonate of iron—a good looking lode. I find we can have a 38 ft. of waterfall from the Tavy, which will enable us to work a wheel of any power.—B. COOKE: July 7.

TINCROFT.—I beg to hand you my report of these mines. The new engine-shaft is about 7 fms. below the 90 fm. level, ground still hard, with branches falling in from the north, containing copper ore, which are likely to improve with the lode in depth (that is the south lode). The lode in the 90 east is 3 ft. wide, the south part containing some good quality copper ore, and very promising; the winze, sinking from the 80 fm. level, immediately over this end, is worth 15*l.* per fm.; the lode in the west end, same level, is at present unproductive, though very promising to make ore in depth. The lode in the 80 fm. level east is 3 ft. wide, orey, but not rich; the 80 west has very much improved in the past week, both in size and quality; it will now produce about 2 tons of ore per fm., worth 4*l.* per ton. The lode in the 70 east is 4 ft. wide, worth 12*l.* per fm. for tin; the same level west is at present unproductive. The lode in the 60 east is 4 ft. wide, producing pretty good work for tin; the lode in the 60 west is 20 in. wide, very kindly, but not rich. The 50 east is suspended, and the back of the end set on tribute; from the 50 west we are cross-cutting to the south part of the lode, which part, in the level above and the winze sinking below that level, is now producing some good quality copper ore —we are daily expecting to intersect the part referred to. Palmer's shaft is now about 3½ fms. below the 70 fm. level—the lode, or main part of it being to the north. The lode in the 70 end west (from Palmer's shaft) is 2 ft. wide, producing 2 tons of ore per fm., worth 5*l.* per ton. The 60 end west, being near our boundary, is suspended; the winzes, sinking below the 60, are still producing fair quality work for copper ore. At the south mine, the lode in the bottom of the engine-shaft, sinking below the 152, is 2½ ft. wide, worth 60*l.* per fm.; the 152 west is worth 15*l.* per fm. The 142 east is worth 15*l.* per fm. The stopes, in the bottom of the 152, is worth 12*l.* per fm. The 120 east is worth 6*l.* per fm. The 110 is worth 10*l.* per fm.; a winze, which we have now commenced, sinking below the 100, is worth 40*l.* per fm. An end, which we have also commenced driving west on south part of Highburrow lode, is worth 20*l.* per fm.—all of these bargains in the south mine are valued for tin. This part of the mines is at present the most profitable part, though the prospects in the north ground is still very encouraging.—W. PAUL: July 6.

TOKENBURY.—Two months since it was reported that Crouch's shaft was sunk to such depth as to be in a fit position to drive a 65 level west therefrom. Since that period a whim plat has been cut, shaft planked and divided, cross-cut driven about 2 fms. west, where it intersected the cross-course, and from this point a level has been extended both north and south on the said cross-course, about 12 fms.—viz.: north 5 fms., and south 7 fms.—without shewing any particular change in its progress. The adventurers will recollect that this cross-course will be the means of our seeing several very promising lodes 65 fms. deeper, than where we discovered them in the adit. The 55 fm. level is driven about 6 fms. west from the above cross-course. The lode therein for this distance has been more or less orey—dreggy work that will about free the expense of dressing. The 42 fm. level is west of the same cross-course 27 fms., and has yielded in the last 2 fms. about 2½ tons of copper ore. The lode in the present end still continues orey. At D shaft the 20 fm. level, since last report, has been driven on D lode about 7 fms.; and in this distance has for the chiefest part consisted of quartz, varying in size from 1 to 2½ ft. At the same level (20) E lode is extended on east of D shaft about 25 fms. The last 10 fms. have been a disordered piece of ground—consequently, the lode, in its progress through the same has also been in a confused or broken up state.—T. TRELEASE: June 26.

TRELEIGH CONSOLS.—At the 100 fm. level, east of Christoe, the lode in the end is daily improving, the lode is 2½ ft. wide, worth 20*l.* per fm.; in the 100, west of ditto, we are driving north-west to cut the lode west of the cross-course. In the 90, east of ditto, the lode is 3 ft. wide, but much fallen off in value, worth about 8*l.* per fm.; in the 90, west of ditto, the lode is 1 ft. wide, no mineral; in the 90, east of Garden's, the lode is 3 ft. wide, worth 40*l.* per fm.; in the 90, west of ditto, the lode is 3½ ft. wide, worth 25*l.* per fm. The 80, west of Good Fortune, is driving north in the lode, capels. In the 70, west of ditto, we have cut through the lode, and are now driving west on the south part, the whole of which is poor, capely. In the 60, west of Symons's, the lode is 2 ft. wide, rather more promising, with stones of ore. In the 50 cross-cut north we have driven through a branch 4 in. wide, and are still driving north; in the winze, below the 50, the lode is 3 ft. wide, worth 7*l.* per fm.; in the 50, west of Symons's, the lode is 20 in. wide, no mineral. In the adit, west of ditto, the lode is 18 in. wide, with stones of ore. The west shaft is sinking in the country.—W. SYMONS: July 4.

UNITED HILLS.—In the 90 fm. level, eastern end, the lode is 2½ ft. wide ore of good quality; in the western end the lode is 2 ft. wide, good ore. In the 80 fm. level, eastern end, the lode is 3½ ft. wide, producing ore throughout, of a coarse quality; the rise is communicated to the diagonal shaft, sinking from the 70 fm. level. In the 70 fm. level, eastern end, the lode is 18 in. wide, unproductive. West of James's the lode is 18 in. wide, producing but a small quantity of ore. The lode in the rise, in the 60 fm. level, is 2½ ft. wide, 1 ft. ore of average quality. West of Harper's winze the lode is 3½ ft. wide, 18 in. ore of average quality, looking promising. In the 50 fm. level no alteration for the past week. At Wheal Charles, in the 50 fm. level, the lode is 2½ ft. wide, producing but little ore. In the 40 fm. level the lode is 18 in. wide, orey throughout, of average quality. At Wheal Sparrow, in the 40 fm. level, the lode is 2 ft. wide, producing some stones of ore. In the 30 fm. level the lode is 2 ft. wide, 18 in. ore of average quality.—T. TREVENEN; R. WILLIAMS: July 7.

VENTON GIMPS.—I find, from Mr. Iselin's letter of the 2d inst., that your first general meeting of shareholders will be held at your offices to-morrow; for such occasion I beg to lay before you the particulars of what has been done since our commencement—viz.: about three months, beginning with April last. The first operation was to excavate a large piece of ground for the foundation of engine-house, boiler-house, and stacking; that being done, we have since erected a spacious engine-house, and put on the roof; the stack is also in a forward state of building. The walls of a convenient account-house is built and roof put on; carpenters' shop and saw-house removed from Cornubian Old Mine to this part; the walls of a smithy and yard are up, the former will be covered (or roofed) as soon as possible. Respecting the underground operations, an engine-shaft, called Hay's engine-shaft, has been sunk to the adit level (6 fms. from surface), and at that place we cut a large platt, which is necessary, to enable us to get at the pitwork (fixing, &c.); this shaft is now sunk below the adit about 5 fms. 3 ft.—the water we find very quick for the horse engine, which we put up. We think, however, that we shall not be able to continue longer with that machine than the present week, until the great engine is brought and set to work, which the engineers think will require to accomplish

to the end of next month (August). A great deal of the engine is taken abroad, but none yet carried away. We also drove several fathoms of cross-cut into Hay's engine-shaft from the adit—thus you have an outline of what is done. After the engine goes to work our object will be to push down the engine-shaft with all possible speed to a 30 fm. level, and there drive a cross-cut to cut the lode, which will leave 12 fms. of backs to take away in the rich ore ground—it having been worked down by the old Cornubian adventurers to a 18 fm. level, when and where the water became so abundant as to compel them to cease operations; at that point there is a good course of ore (silver-lead), for about 5 fms. in length, worth, per calculation, 20*l.* per fm. We must also endeavour to effect a communication by winzes from the old 18 fm. level to Hay's shaft to the proposed 30 fm. level; but I cannot promise you any returns for 12 months. You must see, from the particulars I have always given you, that it is impossible to accomplish the end sooner. I trust my expectations are satisfactory. Everthing here is going on with spirit, and I can add, with every possible economy.—RICHARD ROWE: July 6.

WEST WHEAL JEWEL.—In the 115 fm. level east, on Wheal Jewel lode, the lode is 15 in. wide, of a more promising appearance than when last reported—driven 2 fms. 0 ft. 6 in. In the 100 fm. level west, on ditto, the lode is 1 ft. wide, all saving work for ore, but not rich—driven 2 fms. 2 ft. In the winze, sinking below the 85 east, on the same lode, the lode is worth 8*l.* per fm.; in a few stems this winze will be holed to the 100 fm. level, after which the men will drive the 100 and 85 east, on Wheal Jewel lode—sunk 6 fms. 1 ft. 6 in.; in the 85 west, on ditto, the lode is 3 ft. wide, worth 10*l.* per fm.—driven 2 fms. 2 ft. In the 70 east, on ditto, the lode is 15 in. wide, very promising for ore—driven 1 fm. In the 12 fm. level east, on Wheal Jewel lode, the lode is 2 ft. wide, of a very promising appearance, worth 8*l.* per fm.—driven 1 fm. 2 ft.; in the 12 fm. level, east of Quarry shaft, on Tolcarne tin lode, the lode is 1 ft. wide, worth 7*l.* per fm.—driven 1 fm. 2 ft. 6 in.; ditto south 3 ft.; in the 12 fm. level, west, on ditto, the lode is worth 15*l.* per fm.—driven 2 fms. 3 ft.—R. JOHNS: July 6,

WHEAL AGNES.—The lode in the stopes is looking just the same as reported last week; the men in the adit level have met with a floor of elvan, which I hope will be cut through in the course of a day or two; we are getting on with our dressing as fast as possible.—B. ROBINS.

WHEAL HOPE.—This mine is situate in the junction of granite and killas; the nature of the strata and character of the lodes much resemble those of Levant Mine, in St. Just. In our last report we stated that the engine-shaft was sunk to the depth of 80 fms., being 60 fms. below the adit level. The machinery consists of a 36 ft. water-wheel for drawing the mine, and a drawing machine attached for drawing the stuff. We find the lode to vary in width in the shaft from 5 to 6 ft.; it is composed of capel, quartz, mundic, and iron, spotted with grey (and occasionally yellow) copper ore. The bottom level has been extended 15 fms. west, and 20 fms. east, on the course of the lode, which is of much the same size and character as it is in the shaft. There is another lode about 12 fms. to the south of the aforesaid lode, which has a very promising gossan on its back. To intersect this lode, there is a cross-cut driving from the shaft, at 50 fms. deep under the adit, and we expect to cut it in a few fathoms further driving. About 150 fms. east of the engine-shaft there is another lode, bearing nearly north and south, being in the same direction as the productive lodes in Botallack and Levant Mines; and the adit level has been extended on it upwards of 100 fms. This lode is as kindly as any of the St. Just lodes at the same depth. We have found rich stones of grey ore in it several places, particularly about 10 fms. behind the present end, where we sunk on a short bunch of grey copper ore, but want of air obliged us to suspend it until it is better ventilated. This adit, thus extending north and south on the course of the lode, is very soon expected to intersect an east and west lode; there are, indeed, indications of our being very near it.—H. TAYLOR: June 25.

WHEAL MARY.—The mine is now drained to bottom, and we find the 80 or bottom level has been extended 10 fms. east and 20 fms. west from the engine-shaft. The lode is large, and consists of capel and quartz, interspersed with copper ore and mundic. There is a rise in the back of this level some fathoms in length; and over this place there is a sink in the level above 10 fms. long, where we have been informed was a good bunch of ore. The 70 fm. level has been extended 60 fms. east, and 70 fms. west of the shaft. There are many sinks in the bottom, and a great quantity of ground worked away in the back of this level. Judging from the extent of the workings, there must have been a great quantity of ore found here; and it may reasonably be expected that the lode will prove productive under these bunches in the 80 fm. level. The 60 fm. level is extended 50 fms. east, and 65 fms. west; the lode in the western end is productive of stones of ore and mundic, and has a very encouraging appearance. In the eastern end the lode is principally composed of mundic. We have two pares of tributers employed in the back of this level, two in the back of the 40, and one in the back of the 25 fm. level. The tutwork men employed at present are—two pares driving cross-cuts at the 25 fm. level, to intersect the Wheal Sisters lodes north, and a new lode south; two pares driving east and west at the 60 fm. level, on the course of the lodes; one pare stoping the 50 fm. level; 6 shaft men driving the 80 fm. level; and at the south Lampen 6 men employed clearing the engine-shaft. The levels in the western part of the mine have not yet been cleared out, in consequence of the lord of Lampen refusing to allow the drawing machine to be attached to the large wheel before the completion of the wheel erecting by us to work the mill. This would have been accomplished long before now, if we could have got the castings from the foundry—they were delivered in the mine on Friday last, and will now be got ready in a few days. The drawing machine is ready to work, and may be connected to the wheel at a few minutes' notice.—The appearance of the mine is quite as good as we anticipated. We have had two men employed in searching the old workings, and have discovered in several places both tin and copper ore which will work on tribute. In the back of the 25, within 5 fms. of the end, there is a branch of copper ore 6 in. wide, of good quality; and in the back of the 60 fm. level, about 10 fms. east and 10 fms. west of the engine-shaft, the lode is 3 ft. wide, of fair quality work.—J. NANCE. H. TAYLOR: June 25.—P.S. Since writing the foregoing, the 60 end west is much improved, and the men are removed from Lampen to drive the 70 west, to get under the improvement in the 60.

WHEAL SISTERS.—The shaft men are again employed sinking the engine-shaft under the 51 fm. level. The 51 fm. level has been extended east 18 fms. in a large lode, productive of ore the whole distance; at the present end it is upwards of 3 ft. wide, and orey throughout. The leading branch in the back stopes behind this end is from 15 to 20 in. wide, producing ore of 9½ per cent. of copper. The lode in the western end of this level is still poor, though it shows favourable indications. It has not yet been extended west so far, by 6 or 8 fms., as to come under where the course of ore was first met with in the levels above. The lode in the western end at the 41, is 2 ft. wide, containing a branch of ore 6 in. wide. In the winze sinking behind this end, the lode is about 3 ft. in width, and orey throughout; and in the back stopes 2 ft. wide, of fair qualnty. The tribute pitches in the western back at this level have produced about 15 tons of ore in the present month, which will yield 8½ per cent. The stopes and pitches in the 31 fm. level east of the shaft are suspended for the present, as the air is very dead. In the past month, by the aid of the blowing machine, we have completed the winze so deep as the 41 fm. level; there are about 8 fms more to drive in the 41 to communicate with this winze. When this is accomplished, and the winze sinking in the bottom of the 41 is holed to the 51 fm. level, we shall be in a position to work the mine to much better advantage, as at present the air is bad both in the 41 and 51, particularly to the east of the shaft. We shall also be able to stope the ground cheaper from the winzes than by rising for stopes. On the whole, the mine is rather improved in the past two months.—JAMES NANCE: June 25.

WHEAL TRELAWNEY.—The engine-shaft is 6 fms. below the 32 fm. level, in favourable ground for sinking. The lode in the 32 fm. level, south of the shaft, is 2½ ft. wide, and worth 16*l.* per fm.; in the same level north it is 2 ft. wide, and worth 14*l.* per fm. In the 22 fm. level north the lode is 3 ft. wide, and worth 20*l.* per fm.; in a winze, sinking below the 22 fm. level, south of the shaft, the lode is 2½ ft. wide, and worth 20*l.* per fm., we have about 3 fms. more to sink, and the same distance to drive the 32 fm. level to hole to this winze. The winze under the 12 fm. level north is holed to the 22 fm. level, and the men are put to stope the back of the 12 fm. The stopes generally are not looking so well as I could wish to see them. The new engine (or Trelawney) shaft is 4 fms. below the surface. The following is a statement of the accounts for March and April months, passed by the adventurers, on Tuesday, the 30th June:—By lead ores sold, 16th May, to Messrs. Mullins Brothers, 172*l.* 9s. 8d.; balance in hand last account, 564*l.* 9s. 3d.; and and discount on timber, 15s. 6d.—making 2357*l.* 14s. The expenditure had been:—For labour costs for March, 289*l.* 13s. 4d.; merchants' bills, 130*l.* 18s. 5d.; labour costs April, 287*l.* 11s. 5d.; merchants' bills, 110*l.* 5s. 2d.; lord's dues, 115*l.* 5s. 11d.—making a total of 933*l.* 14s. 3d. To dividend of 4*l.* per 260th share, 1040*l.*—leaving balance now in hand of 383*l.* 19s. 9d.

WHEAL WALTER.—The south, or A lode, is from 4 to 6 ft. wide, but is not opened on sufficiently to judge of its quality; there are four men driving a short cross-cut into the hill to intersect this lode, when they will discover the properties and direction of it; I expect they will perform this work by the end of the month. The B lode was discovered in driving up the cross-cut, and is from 12 to 14 ft. wide, of a highly promising character; there are two men employed to drive on it towards the hill; this lode is sure to produce ore at a shallow level. The C, or large lode in the plantation, is from 5 to 6 fms. wide (30 to 36 ft.), and is composed of mundic, sugary spar, and beautiful flookan. The London shaft is now sinking to intersect this lode at 25 fms. from the surface, 18 fms. are already sunk; and I should hope, by the end of August or second week in September, to see ore coming up as fast as the rubble is now. They have not much water in the shaft, and I expect to be able to go down and cut the lode without any further machinery than a whim, which they are about erecting; but a small steam-engine must be had, which I shall be able to write more about hereafter. The cross-cut is still continuing towards the D and E lodes. I do not think that there was ever a mine opened with such splendid appearances; and, if there is a second "Wheal Maria" in the district, it is here. I believe the captain to be an excellent miner, and he is very attentive to his duties.—July 3.

YEOLAND CONSOLS.—For want of surface water to drive the pressure engine at the rate required to drain the 50 fm. level, we are for the present driven therefrom to the 30 under adit, where we are driving two ends on the course of G lode. The 30 east is driven from Croker's shaft about 28 fms., and the lode consists principally of quartz, peach, and mundic, spotted with copper ores, varying in width, from 1 to 3 ft. The 30 west is extended from Croker's shaft about 12 fms.; lode varying in this distance from 2 to 3½ ft. We are soon expecting in each end to get into parts of the lode of a more favourable character than where we are now driving.—T. TRELEASE: June 25.

FOREIGN MINES.

BOLANOS MINES.—*San Clemente, May* 16.—Since my respects 17th ult. I am in receipt of your favour of 28th February. My subsequent letters will have shown the causes why I was unable to carry into effect my proposed journey.

SAN CLEMENTE, SAN NICOLAS, AND MALANOCHE MINES.—These mines have continued in progressive exhaustion, and the raising of ore has, consequently, decreased; it hardly reaches 70 cargas weekly, not sufficient to cover the memorias, notwithstanding the great reductions effected in these. So far as these mines are concerned, the only motive for continuing the expense of Rondanera drainage is the chance of still discovering something in the west ends; but these having been driven so far in borrasca, the chances of discovery can hardly be considered deserving the expense of driving with so costly a drainage. At any rate, I think the risk may be run of stopping this drainage, and proving how high the water may rise, in the hope that it may not impede our driving in the west end of La Luz. In case of need, the drainage may be at any time resumed in Rondanera. We have lately broken into a small bunch of good ore in the rise above our present west end of La Luz, but it is hitherto too narrow and insignificant for much to be expected from it; there is no reason, however, why it may not improve.

SAN FRANCISCO DE PAULA.—This mine has for some weeks past been producing an average of more than 100 cargas weekly, worth about $7 per carga, which is, consequently, little short of covering the weekly memorias. The buscones in this mine have learned to work on narrow veins of ore, which have frequently opened into rich bunches, and given them very high wages; some of the small veins, formerly left in the workings of San Miguel, have been very successful in that way. About 40 peones by day and night are thus profitably employed. Since the second malacate has been at work, and the removal of the attle facilitated, I have resumed the tutwork in the west end of San Miguel, and it already begins to show promise of good ore. Another tutwork bargain is also at work, cutting through the lode of San Miguel just at its union with the 125 vara level, and ores also are appearing here. The level, called 125 vara, is only 108½ from the mouth of the shaft, and, as its name could but cause confusion hereafter, I have altered it to that of "Level, No. 2," by which it will be called in this month's account. The next level will be at 140 varas from the mouth of the shaft, and will be commenced, no doubt, the week after next, 2 varas of sinking only being wanting. The ground in the bottom of the shaft has become excessively hard, so that we gain hardly 3 varas weekly, and the price is now upwards of $100 per vara. We are now clearing out the old workings at the east; we have already opened some spots, on which the buscones have gone to work, and expect we shall find others.

LORETO.—The cross-cut in this mine having gone quite through the Rayas lode without discovery, has been given up.

VETA BELLA.—All work in this mine is suspended.

CELESTINA.—The 100 vara cross-cut was continued quite through the lode without further discovery, and this work is suspended—at a more favourable time we shall open ends upon the lode. The 64 vara cross-cut cut the Celestina lode at about 15 varas from the shaft, and has been driven through this lode, which is 5 varas in width, divided into veins of pyrites, assaying only 3 ozs. of silver per monton. The underlie of the Mayorazgo has been found much greater than when it was first seen, and it has, consequently, joined the Celestina lode above the adit level. Next week we shall begin to rise to meet it, so as to hasten the communication of a footway down to the 64 vara level, with the view to a future trial of the lode. On the Mayorazgo lode our works have continued; the north end has been driving in ore of a very high ley, from 40 to 80 mcs., but very narrow. The south end, being without ore, has been stopped. The winze No. 1, which is sinking as a footway to the 64 vara level, was found to have lost the vein; and at 12 varas depth, it has been recovered by a short cross-cut into the upper wall, and discovered in good ore of the same description as we have found elsewhere, and giving another proof of the steadiness of this vein. In winze No. 2 a bargain on the ores, as advised in my last, was sunk about 7 varas on ore (the raising from this winze and the north end amounted to 96 cargas in the week ending 2d inst.); the sinking was then stopped by the overhanging wall giving way, and the necessity of supporting it with timber; it has since been resumed, but the ore has become too narrow to pay the costs of the bargain, and it is now stopped. In lieu of it, another bargain has been given in the roof of the level on the ore since opened in the north end, and very rich ore is falling from it, though not in large quantity. From what we have seen of the Mayorazgo lode, I am encouraged to look for an increasing supply of good ore from it. I consider that it is now very nearly covering its expenses, notwithstanding the numerous discovery works on hand. The north cross-cut of 64 vara level advances about 3 varas weekly, and we may hope to cut the Principe lode in the course of next month. The old workings (by our immediate predecessors) on the Celestina lode, having been left quite dry, have been cleared of the rubbish which had fallen into them, and a winze has been commenced from their lowest part, by a bargain at $15 on a narrow vein of ore, assaying 15 mcs. 3 cargas of this quality have been filled during the three days this bargain has been at work, so that this may prove a source of immediate assistance to us: it is the first ore we have broken in the Celestina lode.

CERRO DEL BOTE.—For some weeks past the extraction from this mine has reached 600 cargas weekly, the average real produce of which in the patio is about 6 mcs. per monton. The ventilation is not yet effected, or the raising would be much larger; this extraction is, however, sufficient to leave good profit.

From a Letter, dated San Clemente, May 21.—*Celestina Mine.*—Since closing my despatches, very rich ore (101 mcs.) has been found in the winze No. 1 on Mayorazgo lode, 4 in. wide.

Statement showing the General Results of the Mines and Haciendas for April:—

Mines.	Profit.	Loss.
San Clemente Mine	—	$ 1013 5 2
San Nicolas	$ 213 6 3	—
Malanoche	—	483 6 0
San Rafael	204 4 0	—
Veta Bella	—	14 4 4
Loreto	—	202 4 6
La Celestina	—	3666 4 0
Disputed ground	2168 4 1	—
Haciendas	6793 3 2	—
	$9380 1 6	$5351 0 4
Loss	5351 0 4	
Net profit	$4029 1 2	

PACHUCA MINES.—*May* 29.—*San Miguel.*—In the shaft there is a large lode, but none of the assays exceed 5 mcs. per monton. Next week we shall commence the cross-cut south from the bottom of the shaft, to examine that part of the vein, which is composed of hard quartz, and which at 30 varas above contained 7 mcs. per monton, and if is hoped something better may be met with in the progress of this work.

Esperanza.—The sinking of the shaft has been hindered, owing to foul air. In order to carry on this work effectually, I think it will be the most prudent plan to drive the 95 vara level, instead of dividing down the shaft, as, by this means, we shall examine the lode for a considerable length, and also certain points where it is intersected by La Grande and other veins.

San Gabriel.—The bottom of the shaft was found at about 20 varas from surface, in a lode composed of quartz and mundic, but in consequence of the cleaned mundic not assaying more than from 1 oz. to 8 ozs. of silver per monton, and the water being abundant, it was suspended.

Santa Susana.—This mine is at present only 21 varas deep, and is situated on a spot where two lodes cross each other, and I propose to sink 4 or 5 varas deeper; this week two bags of ore have been broken, which assayed very well.

Costs in April, $942. The Rejona torta, of 14 montones, has been washed, but the silver is not yet burnt; it will produce about 100 mcs. of silver.

REAL DEL MONTE MINES.—*Mineral del Monte, May* 28.—Your despatches for 31st March, arrived here on the 9th inst.; and I have now the satisfaction of remitting you the usual monthly reports of the mines and haciendas—by the former you will observe our prospects are beginning to assume a more favourable aspect. By Capt. Rabling's report, you will find a full description of all the underground workings on the Biscaina vein; but those to which I desire to call your particular attention are the Santiago levels west, rise above same, near the end, and to the San Pablo and San Enrique bottoms, below the San Juan. Each of these places contain good smelting ore, and produced in the last four weeks as follows:—Week ending 2d May, azogue, 200 cargas, and fuego 14 cargas; 9th, azogue, 249 cargas—fuego, 40 cargas; 16th, azogue, 175 cargas—fuego, 59 cargas; 23d, azogues, 147 cargas—fuego, 80 cargas. During the first week of the month, the workings were full of water—while about 100 varas of main rods were being changed in the diagonal shaft. In the Santiago level, about 15 varas of good ore have been passed through; and, judging from the appearance of the lode in the bottoms, below San Juan, there is every reason to expect it will continue for some time to come; the last 2½ varas produced 60 quintals of ore, which assayed 160 mcs. per monton. You will also observe, that Capt. Skinfill, in his letter, describes the winze of San Pascual as continuing in good ores; during the last 4 weeks it produced 5 montons, assaying about 200 mcs. per monton, besides a large quantity of azogue; the winze is carried down 3 varas long, and is now 15 varas deep—the ends have been left in reserve. The silver produce for the present month will correspond very nearly with that put down in the estimate. From the Fundiciones, at Regla, I expect 30 bars; Patio, 20; and from Sanchez, 7—value about $68,000; and as the cost will probably not exceed $56,000, there will, consequently, result a profit of $12,000. Estimate of cost and returns for June:—cost, 4 weeks, $53,400; returns, 54 bars, $64,800; profit, $11,400. The above estimate is made as follows:—From the Fundiciones, 20; Patio, 18; and from Sanchez, 6 bars. At present, there are five furnaces at work, which smelt at the rate of about 126 cargas per week. I fear, however, we shall not be able to continue this number constantly; but I do expect to send 100 cargas weekly, which will give the amount of silver put down in the estimate. Seeing the silver produce for this month, and looking forward to that of next, and to the present state of the workings already described, I think, in all probability, there will be a continuation of profit throughout the present year. The large quantity of water, both at Dolores and Acosta, is the greatest difficulty we have to contend with—at the latter it amounts to no less than 1543 gallons per minute; and in Dolores, 1100—so you will perceive that, by every little stoppage of the engine, owing to accidents, or while making the necessary repairs, the underground operations are liable to interruptions. *Rosario.*—I beg to refer you to Capt. Trenear's report for information respecting this mine. You will observe that we have, during the month, discovered and cleared out some extensive workings on a south lode, which are interesting; I send enclosed a plan by which you will observe their relative situations. The ore on the south lode does not appear to be so abundant as on the north, but contains a somewhat better ley. The ores remitted to the haciendas of late from this mine have been very poor, owing, I believe, to a want of care in the dressing; but the pinta is sometimes difficult to be distinguished; there is, however, a great abundance of ore in sight, which, I trust, we shall be able to work profitably. I take due note of what you say respecting the importance of pushing on the works of Sanchez hacienda, connected with the erection of the 16 barrels; and I have now the satisfaction to inform you, that nearly all the artisans are employed about it. Some little delay has occurred about the castings, as the smelting furnace, which was formerly supplied with blast by bellows, worked by peones, is now provided with a fan blast, worked by mules, which Mr. Artha has just completed, and answers remarkably well; and I believe it will enable us to make all our small castings here even cheaper than we can get them from England. The masonry of the wheel pit at Sanchez is nearly complete, and, in the course of 8 or 10 days, I expect to commence putting up the wheels; and as all the timber work for the platforms, &c., &c., is already prepared under hand, I expect we shall put the first 8 barrels to work in the early part of July. The delays attending these works have been explained in former letters; and you may rely that every endeavour shall be made to hasten them as much as possible; but it should be borne in mind that, although we have a large establishment here, we cannot increase on an emergency, like in England, the number of efficient artisans, and procure the necessary material for erecting works of this kind; even in case we were disposed to appropriate a large portion of the surplus funds, which, I observe, the directors authorise me to do, if by that means the works could be more quickly brought to a conclusion. I am fully impressed with the importance of what you say respecting the saving of time, and have frequently impressed it upon the attention of the administradores. I said, in my letter of last month, that we considered it possible it would be more prudent to use the new wheel for grinding than for working barrels; but, although Mr. Spangenberg's beneficio answers very well, I have, after reconsidering the subject, determined to proceed with the erection of the barrels. When Mr. Spangenberg's plan is introduced on a large scale, other means for grinding must be devised. Mr. S. has reduced this month upwards of 100 cargas, the cost of which has not exceeded $20 per monton; and assays of the residues have varied from 6 ozs. to 2 mcs. 2 ozs. At first, this beneficio went on very slowly, as Mr. S. found it very difficult to make the water filtrate through the ground ore; he has, however, in a measure overcome this, and has lately, with the two small tubs, been reducing a monton, or 10 cargas daily. As Mr. Spangenberg expressed to me his opinion, that he could extract the silver from the pegaduras from the furnaces at Regla by his new beneficio, with water only, I requested him to make a trial of the same, and he has now got one in hand, which is going on very well; about this, and the other operations of Mr. S., I shall be able to send you a more detailed account by next packet. Sanchez is at present reducing about 280 cargas per week; but the ore of late, chiefly from Rosario, has been of an unusually low ley, which accounts for the small returns from this establishment. Taking into consideration the increased quantity of fuel consumed by the calcination of ores, both for the barrels and Mr. Spangenberg's new process, it becomes a matter of the utmost importance to look well after the woods. My attention has long been directed to this, and, although there is no fear of our being driven to extremities for the next 50 or 60 years, yet I deem it prudent to go to some expense to replant some of the grounds which have been left bare, and have accordingly ordered 10 peones to be constantly employed in this work. I have also lately purchased a very pretty piece of wood about two miles from Sanchez for $500, which I consider very cheap. I have read with much interest the printed report you sent me, dated 25th March, and I feel no doubt whatever we shall eventually realise the expectations of the directors—*i. e.*, when there is sufficient hacienda power to reduce azogue ores to cover the expenditure, the smelting ores will leave very handsome profits.—Enclosed, I beg to hand you Bills of Exchange on London for 2500*l.*

UNITED MEXICAN MINES.—*Guanaxuato, May* 24.—*Mine of Rayas.*—To the report on the state of the workings in this mine, by Mr. Glennie, I can add nothing. The most favourable indications which present themselves, are in that of Santa Cecilia, which has undergone a change for the better, leading us to hope for a still further improvement. The following statement shows the produce of the mine for the last four weeks:—

4 wks. end.	Picked ores.	⅛ amt. sales.	Outlay.	Excess of Outlay.
Apr. 18.—Cs. 1879½	.....	$ 7,104 7 4	$ 16,867 6 3	$ 9,762 6 7
May 16. „ 2127	.....	6,080 5 4	19,937 2 2	13,856 4 6
Cs. 247½		$1,024 2 4	$3,069 3 7	$4,093 5 7
Increase.		Decrease.	Increase.	Increase.

Quicksilver.—Since my last, I have made a further purchase of six bottles, and by the next packet I hope to receive a supply from the directors.—W. HEATH.

Report on the State of the Workings of the Mine of Rayas.

May 22.—*La Purisima.*—A small portion of ore of common ley is extracted from the old workings in this part of the mine.

San Lorenzo.—The dry walls are being raised with all the expedition possible, and ores are being thrown down from the upper parts of the lode, wherever the operation can be carried on with perfect safety. In the lower part of San Lorenzo, the ore is now being followed up in the direction of the old workings of San Pablo, situated above Los Reyes; on the north-west side of these points some ore is found in a long pillar, through which it is intended to drive an end: 8 pare of barmen are now employed by day, and 11 pare by night.

San Miguel.—San Dario has been yielding a fair quantity of ore during the last month, the quality of which has not varied much; the threads of good ley continue in about the same proportion as hitherto, and the general body of ore is well defined, with narrow offsets branching into the upper portion of the lode. The other two workings assist in making up the produce from this side of the mine: 13 pare of barmen are employed by day, and an equal number by night.

Santo Toribio.—8·90 varas have been driven since the last report, and the working is now advancing fast towards the Malanoche division of the lode. Some threads of quartz have been cut, in some of which there has been a very slight appearance of ore.

Santa Cecilia.—A favourable change has taken place in this end during the last fortnight, inasmuch as the vein is not so extremely hard as it has hitherto proved, and the advanced point is now nearly free of water; 5·69 varas have been driven in four weeks. The points, worked on joint account by buscones, continue in a very impoverished state, there not being one campo that calls for any particular notice. It will be seen, from the usual statement that accompanies the report, that there is a further decrease in the amount of half sales for the last month, as compared with the previous month, and also a considerable increase in the amount of outlay, which increase is caused by the purchase of stores previous to the setting in of the rainy season. The water in the great shaft has been lowered to such a depth as to leave the communication with San Simon quite free, but there is no diminution in the number of malacates for the present, as the drainage is still found heavy. The water is now confined to the shaft, and this circumstance affords the opportunity for extracting a small quantity of good ore from the neighbourhood of San Simon.—G. R. GLENNIE.

WEST INDIA MAIL.—The *Tay* arrived at Southampton, on Saturday night last, with the West India and Mexican mails. Here dates are:—Tampico, May 2; Vera Cruz, June 2; Havana, June 11; Honduras, May 20; Chagres, May 26; Jamaica, June 8; Carthagena, May 29; Demerara, June 4; Trinidad, 6th; Barbadoes, 8th; Grenada, 10th; St. Thomas, 16th; La Guayra, 16th; Bermuda, 20th. The *Tay* has brought home a valuable cargo, consisting of 125*l.* British coin, $1,940,000, 1880 ozs. of gold dust, 520 lbs. of platina, 1½ lbs. of pearls, 1 package of emeralds (value $20,000), 138 cases of vanilla, 32 bales of jalap, 100 bales of tobacco, 26 cases of cigars, 55 packages of pines, 18 cases of preserved turtle, 5 cases of tortoiseshell, and 80 packages of sundries.

MARBLE FROM HAVANNAH.—A vessel, named the *Seraphim*, from Havannah, which arrived in St. Katherine's Dock, in addition to the usual cargo, consisting of cigars, sugars, mahogany, &c., had nine blocks of marble on board. We do not recollect an importation of this valuable description of stone to have taken place from that country on any previous occasion, the foreign supplies of the article being generally confined to the Italian and other European States.

VALUABLE DISCOVERY OF LEAD.—An extraordinary discovery of lead has just been made at Wheal Agnes, a young mine in the lands of Lord Mount Edgecumbe, lying between the Old Tamar Consols and the East Tamar. A lode running north-east and south-west, and worth 40*l.* per fm., was discovered very near the surface, and from this between 5 and 6 tons of rich lead has been raised. The lode has also been cut 40 fms. further north, and an adit is being brought to try the lode 12 fms. deep. There is great excitement about it, and parties giving at the rate of 30,000*l.* for the mine. The adit, which is now in course of driving, will prove whether or not the mine is to become a "Maria" in lead.—*Falmouth Packet.*

NEW BRITISH IRON COMPANY.

The half-yearly meeting of the proprietors of this company took place, on Tuesday, the 7th instant, at the new establishment in Threadneedle-street, City. WILLIAM ROUTH, Esq., presided.

The other directors present were G. P. Barclay, J. S. Brownrigg, Matthew Harrison, Joseph Hoare, Charles Kerr, J. Horsley Palmer, J. H. Ravenshaw, and Samson Ricardo, Esqs.

The advertisement calling the meeting, and the circular addressed to each of the proprietors, having been read,

The CHAIRMAN said, it would be in their recollection, that at the last meeting of the company, it was suggested by several of the proprietors, that it would be a great convenience if half-yearly dividends could be made. The board of directors had since given their attention to the subject, and he had the satisfaction to state, that, on the present occasion at any rate, there would be no difficulty in doing so. Nine months of their commercial year were now past, and all the iron manufactured during that period had been disposed of; and, as a large proportion of the make of the last quarter was under contract prices already fixed, the board had no difficulty in arriving at that report unanimously, which he should have the pleasure of reading to the meeting. The report was follows:—

REPORT.

The Deed of Settlement provided, that the accounts of the company shall be made up annually to the 30th Sept., and considerable inconvenience would result from weighing the stocks and balancing all the accounts more frequently. But, as it has been suggested, that it would be very desirable that half-yearly dividends should be made in July, the directors have turned their attention to the subject,—and they are of opinion, that such dividends may be made whenever the experience of the portion of the year then expired, and the state of the contracts and engagements of the company for the remainder of the year, enable them to form a reasonable estimate of the profits of the whole year's operations. The iron trade has been always subject to great fluctuations; and, therefore, if the prospects in the middle of any year should not be such as to enable the directors to estimate, satisfactorily to themselves, the result of the operations of the whole of that year, they consider they should be best acting up to the spirit of the above principle if they did not call the shareholders together, in that case, for the purpose of recommending a half-yearly dividend, but postponed any decision on the subject, until the annual balancing of the books after the termination of the year, when the actual result of the entire year's operations will be ascertained. As regards the present year—looking to the estimated result of the part of it already past, and to the contracts under which the operations of the company will for the most part be conducted during the remainder of the year, the directors have to report, that they consider themselves justified in recommending a dividend of 20s. per share for the first six months, feeling confident that it will be in their power to recommend a similar dividend for the second half-year. The directors have great pleasure in making the present recommendation, and also in stating their belief that, notwithstanding the dulness existing in every branch of commerce, there are strong grounds for considering the prospects of the iron trade to be satisfactory and encouraging.

The CHAIRMAN said that, looking at the general prosperity of the trade, to the stock of iron throughout the kingdom as very limited, and the probability of there being very little check to railway enterprise, which must go to a very greatextent in this country, as well as in others, the directors felt perfectly justified in stating what they had done as to the prospects of the trade. If no one had any observations to make, he should move—"That the report ofthe directors be received, and adopted; and that a dividend of 1*l.* per share be declared out of the profits of the company." (Hear, hear.)

J. H. PALMER, Esq., seconded the motion, which was carried unanimously. The meeting then adjourned.

ROYAL SANTIAGO MINING COMPANY.

The annual meeting of this company was held at the offices, in Broad-street-buildings, City, on Wednesday, the 8th inst.

ALEXANDER ROBERTSON, Esq., took the chair.

Mr. DOCKAR, the secretary, read the advertisement, and the minutes of the last meeting—also the following report of the directors:—

REPORT.

The directors, in the discharge of the duties appertaining to them, have to report to the proprietors, the present state of the company's affairs, and the result of the operations for the half-year, ending 28th Feb., last. Throughout that period, good progress has been made, in developing the St. Andrew Pertenencia, and it will be satisfactory to the proprietors to learn, that, at the beginning of March, the cross-cut intersected the St. George lode in this mine. The vein is large, and productive of good ore.

As the mines of St. George, and St. Andrew, could not be cleared of the great accumulation of water until the lode was intersected, the six months' raisings or ore have necessarily been obtained from the old reserves. The quality of the ores, however, being inferior, a diminution will be observed in the amount of their proceeds. The quantity raised is 2725 tons, of which 1737 tons have been sold, and produced net 12,925*l.* 7s. 10d. The remaining 988 tons (excepting 64 tons daily expected) are in Swansea, and part thereof were sold on the 24th June, and the remainder are for sale at the ticketing on the 22nd inst., which, being credited in the account at the estimated net proceeds of 8354*l.* 10s. 7d., make, with the interest accrued on the reserved fund, a total of receipts for the half-year of 21,982*l.* 9s. 6d.

The expenditure for the same period, including 519*l.* 1s. 10d. for income tax, amounts to 19,053*l.* 9s. 10d; leaving a profit of 2928*l.* 19s. 7d., which being placed against the deficiency on the half-year, ending 31st August last, there results a gain upon the operations of the year of 654*l.* 3s. 9d.

The latest letters from the agents, report the quantity of ore raised in the three months, ending 31st May, to be 1403 tons; and, by the powerful steam machinery recently erected, it is expected the water will be kept in future under complete control. With respect to the Sanctuary ground dispute, the proprietors were informed at the last meeting, that the law-suit between the three litigating companies was, by an order from Madrid, decreed to be heard by appeal in the court in Havana. Under these circumstances, the directors thought it expedient to dispatch Mr. Treweek to Havana (who, it will be recollected, had for some years conducted the affairs of the company at Cobre), for the purpose of watching the law proceedings, and, if possible, to make arrangements for the settlement of these disputes upon an equitable basis. The directors have lately received the copy of an alleged agreement, stated to be the basis of a settlement with the agents of the Cobre Company in Havana, which is not within the powers they had given, and which they cannot, therefore, confirm, but treat as in operative. After duly considering the situation of the company, the directors are of opinion, that the undivided profits of the half-year, reported in July last, may be paid to the proprietors, which will be at the rate of 2s. per share, on the 7000 shares of the company, amounting to 805O*l.*, and payable on and after the 16th inst.

Abstract of Balance-sheet, June 30th, 1846.

Money at interest, at bankers, in the Bank of England, and to be received for ore	£49,791	11	4
Expenditure since 1st March last, for the current half year, ending 28th August, 1846, against which 1403 tons of ore have been raised, but not arrived	6247	10	8
Steam machinery account, &c.	710	0	0
	£56,749	2	0
Reserved working capital account	£47,013	3	6
Unclaimed dividends	105	0	0
Amount of current acceptances for expenditure at the mines, freight of ore sold, not due, and ot sundary accounts for materials, supplies, &c.	6701	18	11
Profit and loss account, half-year ending 28th Feb., 1846 (particulars as under	2928	19	7
	£56,749	2	0

Dr. *Profit and Loss Account for the Half-year ending Feb. 28, 1846.*

To expenditure in wages, arriage, supplies, export duty in Cuba, law, and miscellaneous expenses	£18,534	8	1	
Income tax	519	1	10	
Balance, being profit on the half-year	2,928	19	7	
Total				£21,982 9 6
Cr.				
By interest on money lent on security, discounts, &c.		702	11	1
Net proceeds of 1737 tons ore	£12,925	7	10	
Ditto 988 tons ditto, estimated at	8,354	10	7	—21,279 18 5
—2725 tons				
Total				£21,982 9 6

On the motion of Baron de GOLDSMID, seconded by the Hon. LESLIE MELVILLE, the report was received, approved, and adopted unanimously.

Mr. LEE complained of the accounts not being sufficiently detailed for the proprietors, and said they ought to be put in their hands on entering the meeting, in order that any one might be prepared to make observations. He also complained of the small amount of interest that was realised from the reserve fund, and wished to know what had been expended, and was likely to be expended, in respect to the suit with the Cobre Company?

The CHAIRMAN replied, that it would not be prudent for them to speak of those expenses whilst the suit was going on with the other companies. (Hear, hear). As to the interest of the reserve fund, it was about 700*l.* for the half-year; they were satisfied with the current interest for this fund, provided they had it invested on good and available security, which, in his opinion, was better than looking out for a large interest with a less security.

Baron de GOLDSMID reminded the hon. proprietor that this 47,000*l.* was looked upon as working capital.

Mr. Ald. THOMPSON said, the money was lent on the security of Bills of Exchange, Exchequer Bills, and on the security of stock, which caused the amount to be no more than 700*l.* The amount at the banker's was not considerable, looking at the trouble that was given them—it was only 1402*l.*; and in the Bank of England they had but 1600*l.*—so that these amounts could not be considered over large, for they had bills falling due every day. No concern of any weight could be conducted, or any credit attached to it, with less balances. (Hear, hear). It was stated that the accounts were condensed in three or four lines; surely the hon. proprietor would not wish them to give all the detail of the pay sheets, for the accounts were nearly all for labour and carriage of ores, and would take them days to go over. The accounts were examined; and if any explanation were demanded, it was always promptly afforded to the directors from abroad; besides which, the accounts were gone into by the auditors. (Hear, hear). He did not think such observations fair, when the directors had taken upon them such immense anxiety for the last two or three years, especially in respect to the management of the company. For his own part, he wished that anxiety was at an end; and would be ready at any time to give way to any other gentleman they might appoint, though he did not wish to shirk the responsibility; but, then, their conduct ought to be approved by the shareholders as their reward. (Hear, hear).

Baron de GOLDSMID protested against their taking inefficient security for the sake of larger interest. They had now 47,000*l.*, most of which was lent on bills, Consols, and Exchequer Bills, and their ore in Swansea representing the remainder. They were now going on producing ore equal, or more than equal, to the expenditure. He never knew a mining company where every detail was given in their accounts, but it was competent for any proprietor to see them by asking the secretary.

Mr. LOUSADA thought the directors were right in refraining from giving more detailed accounts, more particularly just at present. As to the directors, he was convinced that no company ever had in its management gentlemen more efficient, more zealous, or more respectable; and he hoped they would never leave them while any difficulty remained to surmount. (Hear, hear).

The CHAIRMAN having signified his wish to retire from office, from a desire, on account of his health, to live in the country, a great opposition was manifested, from the fact of this gentleman's great experience at the mines, and his valuable aid at all times to the company. He considered another director in his stead quite unnecessary: he would continue to give his aid to the company at all times through the secretary.

Sir S. SCOTT, Bart., Mr. WILSON, Mr. Ald. THOMPSON, Baron de GOLDMID, and the Hon. LESLIE MELVILLE, urged the propriety of the worthy chairman not tendering his resignation—at a time, too, when his advice was so much required.

After some conversation, it was proposed by Mr. Ald. THOMPSON, and seconded by the Hon. LESLIE MELVILLE, that the worthy chairman should continue in office at least for six months longer. (Hear, hear, hear).—The motion was passed unanimously.

Mr. Jerningham was then re-elected an auditor unanimously; a vote of thanks was then passed unanimously to the directors, and the meeting adjourned.

MINING COMPANY OF IRELAND.

The half-yearly meeting of shareholders, was held at the offices of the company, Lower Ormond Quay, Dublin, on Thursday, the 3d instant,—JAMES DAWSON, Esq., in the chair,—when, after the usual preliminaries, the following report was read:—

Your board have now the pleasure of submitting, for your consideration, the following report of the progress made in your affairs in the past half-year:—

The company's profits in that period amounts to 8348*l.* 3s. 7d., exclusive of 1314*l.* 7s. 11d. expended in extension of the works in progress, and in searches for minerals, as set forth in the audited accounts now presented.

The Knockmahon Copper Mines, county Waterford.—In former reports your board stated fully the peculiar position in which the company is placed with regard to an important section of the copper mines, by which the more profitable extension of those works has been prevented for some time past; a position which has not yet been altered, and the consequence has been a further reduction in the amount of produce obtained, by which the company's profit has been affected. In the other sections of these mines the progress made, and the present prospects, may be considered satisfactory.

The Sliwardagh Collieries, county Tipperary.—The suspension of the company's works at Earl's Hill Colliery, noticed in a former report, was, as then expected, of short duration, information having been received that only three men participated in the attack on the steward, who has been restored to health, and is again in charge of the works, which have been resumed, and perfect harmony has since then prevailed between the employer and employed. Your profits in this district, and at the Knockmahon Copper Mines, have been in some degree curtailed by an endeavour, during the recent pressure, occasioned by a failure of the potato crop in those districts, to provide food for the families of the men employed, in which endeavour there has been already distributed 150 tons of Indian corn meal, purchased for cash, and sold under cost-price, a proceedings not dictated altogether by philanthropic feelings, but adopted with the view of forwarding your best interests by alleviating the severe pvations to which your men their families would have been liable, if the distressing circumstances in which they were placed had not been attended to by your board.

Duhallow Colliary, county Cork.—The level in progress to unwater Lisnacon Colliery, has been driven 226 yds. in the direction of the coal, and is now supposed to be within 700 yds. of the point at which it will intersect the coal.

Glendalough Lead Mines, county Wicklow.—Your board has been disappointed by the results of the workings at the Glendalough Lead Mines, nor is the present prospect so favourable as there was reason to expect when you were last addressed on the subject; but, from the great extent of ground opened, and the mineral character of the large district comprised in the company's lease, your board continues to entertain favourable expectations of more extensive profit from it than has been realised for some years past.

Calme Lead Mine, county Wexford.—The questions at issue, with the tenant of the surface not being yet adjusted, the workings of Calme and Ballyhiland Mine has not been resumed.

Ballycorus Lead Mine, county Dublin.—The searches in the cross-cut driven in the valley, as described in a former report on Ballycorus Mine, and the ground having been described by the resident mine agent as being unfavourable, the work was suspended, and the searches in the old mine on the hill resumed, but as yet without profitable result, although the indications have been and are considered favourable.

Ballycorus Lead Works, county Dublin.—A reduced scale of profit will be observable in the accounts of the smelting works, which is attributable to the short produce noticed in treating of the lead mines, and in part to expenditure in improvements, with a view to future advantage. The present available assests of the company, in stock of materials, and other floating capital, including valuable leases, cash, bills, and Government securities, are stated at 163,931*l.* 12s. 5d.; and the liabilities of the company, 5743*l.* 17s. 2d.

Under these circumstances, and holding in view the present prospects of future profit from the several concerns, your board is induced to recommend that a dividend be now declared, at the rate of 12½ per cent. per annum upon the deposited capital stock of the company, to be payable on and after the 1st of August next.

An abstract of the accounts of the company was also read.

Sir ROBERT KANE moved, "That the report and abstract of accounts now read be received, and 500 copies thereof printed, and distributed to the proprietors." The nature of the report, although it did not present to the proprietors such large returns as had been received on former occasions, must still be regarded as decidedly satisfactory, and such as justified them in anticipating much more favourable returns in future. The state of the mines of Knockmahon was principally due, as the proprietors were aware, to the obstinacy of the proprietors in fee, with respect to arranging with the company about royalty, whereby the more extended working of those mines was impeded, and the amount of returns from them consequently kept down, which would be the case until Mrs. Osborne, the proprietress, should come to some liberal arrangement with the company. With regard to their coal mines in Tipperary, it was satisfactory that the re-establishment of harmony amongst the people, there admitted of their working being continued without interruption. The figures of the account for the past half-year, had been affected by the interruption which had taken place, it having lasted for a considerable period. On the whole, however, he thought that the company must be considered as having progressed in a decidedly satisfactory manner.

Mr. ATKINSON seconded the resolution.

Mr. GIBBON observed, that, if the report were more ample, it would be more satisfactory. There were portions of their works to which it contained no reference; and considering that they only met twice a-year, the proprietors expected to receive information from the report. With regard to the explanation, which had been given by the worthy directors, as to the operations at Knockmahon, it was the fullest and most candid that had yet been given to the public. Whether sufficient application had been made to the proprietor in fee, for the purpose of softening down that party, and bringing about an agreement, he (Mr. Gibbon) did not know, nor had the directors told them; but this he knew, that communication with the parties was the only means of success; and in case this did not ultimately succeed, it appeared to him that the best thing they could do, would be to commence working the mines to the fullest extent, and derive the largest possible profit from them. A deputation consisting of the chairman, Mr. Pim, Sir Robert Kane, and others of their influential men, to go down, and have an explanation of matters with persons interested on behalf of the proprietor in fee, would, he had no doubt, in these liberal times, be attended with success He would say no more on the subject, knowing that the directors would make use of his suggestions, if they were of any value. The report did not give any account of the possessions of the company in Waterford proportionate with their extent. They had a very valuable property; and if they had treated it with the same discretion that they would put into requisition in managing their own private affairs, he thought they would have been able to give a fuller and better account to the proprietors than they were now giving. That was his opinion, formed on close examination.

The CHAIRMAN.—It always gives me pleasure to hear Mr. Gibbon, because he speaks to the point; but he was aware that, when a matter of diplomacy was proceeding, nothing was ever published until a final determination had been arrived at.

Mr. GIBBON.—Then I am to infer, that you are treating with the parties in question?

The CHAIRMAN.—We are now engaged with the lady's husband. On her behalf, as proprietress of the Knockmahon Mines, there is a demand made of 1-10th royalty. Now during the time of Lady Osborne we only paid 1-20th, the amount at present charged on all the neighbouring mines.—Acceptance of our terms would be very beneficial to the present proprietress, inasmuch as it would be followed by a full and efficient working of the mines.

Mr. GIBBON said, that when all the other mines only paid 1-20th royalty, it appeared to him as bordering on injustice to attenipt to exact double that amount from a company like theirs, which ought to receive every encouragement, both from the proprietors and the landlords.

The CHAIRMAN.—We told them to name their terms. We considered it the fairest way of treating.—The resolution was then put and carried.

Mr. GUINNESS moved, "That a dividend at the rate of 12½ per cent. per annum on the deposit of capital stock of the company be now declared, on and after the 1st of August." To make that dividend up it would be requisite to take 800*l.* or 400*l.* from the reserve fund, which was, however, a large fund, and able to bear the deduction. The directors thought it advisable to maintain the dividend at the usual amount of their dividends, and look forward to future advantages for the reimbursement of the fund.

Mr. GIBBON observed that, although the deficiency in their accounts was but 401*l.* 16s. 5d., they had gained a sum which was to be placed over against it—viz.: 375*l.* 9s. 5d.—that had been gained by a crushing mill; so that the deficiency virtually amounted to only 40*l.* odd.

The resolution having been seconded, was put and carried.

Mr. PIM was then called to the chair, and the usual thanks having been passed to the former chairman, the meeting separated.

DEVON AND COURTENAY CONSOLS MINING COMPANY.—At a general meeting of adventurers, held at the Globe Inn, Plymouth, on the 3d inst., the purser's account was examined by the auditors, showing, when all calls were paid, a balance in favour of the company of 856*l.* 14s. 5½d., was passed and allowed—The following is an estimate of expenses of engine and three months' working:—Engine, 1350*l.*; erection and three months' working, 500*l.*—1850*l.*; balance in hand, 865*l.* 14s. 5½d.; call 1*l.* recommended by committee, 1014*l.*—1870*l.* 14s. 5½d.—The committee and auditors recommend a call of 1*l.* per share, to be made this day, which, with balance to credit of the mine, will pay for the engine, erections, and three months' working, according to estimate.—A call of 1*l.* per share was made, to be paid to the purser, to pay for engine, and carrying on the work, according to estimate.—The following report, from Capt. J. Job, was read to the meeting:—"Since my last report of the 5th of May, I beg to say, that our engine-shaft has been sunk 6 fms. 5 ft.—making the depth from surface 9 fms. 5 ft. I thought that we should be deeper by this time; but, in the commencement of last month, the ground was much harder than I expected, constantly intersectiug ribs of spar, after which the ground changed to a clean blue and white killas; and should the ground continue as it is (and from the appearance I have no doubt but what it will), our sinking will be near 4 fms. per month. The engine-house walls are up, and the masons have commenced the stack; the carpenters are now putting up the roof, and by Monday evening the house will be covered in ready for the fixing of the engines; and, from what I have heard the engineer say, it will be ready to work in about six weeks—it being now all on the ground; but, if the water does not increase more—or, I should say, more than we can conveniently keep with a whim, which is now in course of working—we shall have no need to push the engineer with his work. The lode, and also the ground in the deep adit, have been very changeable; at present, the lode in the back is about 2 ft. wide, composed of flookan, mundic, and spots of ore, with some gossan in places; in the bottom of the end the lode is not so large, but the ground is harder, with more mundic than in the back, and a great quantity of water coming out from all parts of the end; the ground is favourable—we have driven 9½ fms. in the last two months, and at present the price is 5*l.* 10s. per fm. I have cleared up the gossan pit (6 fms.) as deep as I could for water, and, from what I have seen of the lode, I am of the same opinion as I stated in my last report. I have a man shoding in search of lodes further north, which I have no doubt but what there is a lode near where the man is now at work, from the quantity of shode that he is meeting with in the last few days, which shode is in great abundance, and of the most promising appearance, thickly sprangled with ore."

VENTON GIMPS MINING COMPANY.—The first general meeting of shareholders, in accordance with the rules and regulations of the cost-book, was held at the office, 4, Austinfriars, on Tuesday last, when the whole of the 1000 shares, into which it is divided, having been allotted, the formation of the adventure was completed. The report of the committee was received with much satisfaction; it appeared that ever since the latter end of March, when the purchase of the engine and materials of the neighbouring Cornubian Mine was effected, the works have been pushed with great energy. A new engine-shaft has been sunk to the south of the lode, with the view of sinking with all possible speed to the 30 fm. level, thence to drive a cross-cut to cut the lode, which had been already worked to the 18 fm. by the old Cornubian Company, upon rich ore ground, worth 20*l.* per fm.; this will leave about 12 fms. of backs, and thus begin with regular returns; the large engine was taken abroad at the Cornubian, and would be at work at Venton Gimps about the end of next month. The new engine-house was completed, and the cylinder bed quite ready, the stack also was in a forward state of building. Every other necessary erection was proceeding with all possible spirit, at the same time with a due regard to economy.—Thanks were voted to the three gentlemen of the provisional committee, for their zeal and energy in securing the sett, and pushing the works prior to the formation of the company, and the meeting then separated.—[The management of this company is bound (as in Cornwall) to meet the shareholders at the office, and lay before them the accounts of the mine every two months in the year.]

WHEAL POLLARD MINING COMPANY.—A meeting of adventurerrs was held at the Lecture-room, Liskeard, on the 29th of June, when the accounts for the three months, ending May, were submitted and passed, from which it appeared that the labour cost during that period amounted to 128*l.* 2s.6d.; and materials, 86*l.* 5s. 4d.—which, added to balance of last account, 93*l.* 8s. 9d., gave a total on the debit side of 307*l.* 16s. 7d. Against this was set amount of call made at last meeting, 256*l.*—leaving a balance of 51*l.* 16s. 7d. A call of 1*l.* per 128th share was made payable to the credit of the purser, Mr. W. Daniel, jun., with the Devon and Cornwall Bank. The following report from Capt. James Nance was read to the meeting:—"The engine-shaft is 9 fms. deep under the adit level, there being another lode a few fms. to the north of the shaft; it has occasioned a great influx of water, so much so, that the 5-in. lift is become too small to sink the shaft with—therefore, we have been under the necessity of suspending the sinking until we have a larger lift of pumps. A new 8-in. lift has been ordered at St. Austell Foundry, and is promised to be delivered on the mine in a few days. We expect the 5-in. lift will be quite large enough to sink the shaft with under 12 fms. deep. The lode in the shaft, for the last 2 or 3 fms. sinking, has been split into branches by a patch of very hard elvan; we have got through this in the north side of the shaft; and, in about 1 fm deeper, we should judge it would be got through altogether, as it is dipping south about 3ft. in a fathom.

[FROM CORRESPONDENTS.]

GREAT HEWAS MINE.—This extensive mine is about to be resumed immediately by a most influential company of adventurers, formed in London. The great advance lately taken place in the price of tin will prove a stimulus to the exercise of the most energetic measures.

TREWALLACK.—A discovery has been lately made in driving the adit level south, where there is a lode from 8 to 10 ft. wide, carrying a flookan in the centre of about 1½ ft. wide, producing lead, finely disseminated with occasional fine stones of lead embedded in the flookan; the end is now within 15 fms. of the town-place, where there is a large and kindly gossan, from which much is expected. There is an alteration in the 20 fm. level north and south; the sump shaft is now down about 10 fms., and it is intended shortly to drive out and take the lode at the 30 fm. level.

WEST UNITED HILLS.—An improvement has taken place in the north lode, nearly the whole of which was composed of jack, and is now intermixed with fine stones of copper ore and spar. The south lode continues much the same, neither is there any discovery expected for a few weeks, as the level is now driving under falling ground—consequently, is getting shallower, not being more than 5 fms. from surface; but, in course of a few weeks, the end will be under rising ground, and the strata will be different, being now in blue killas, but in a short time they will be driving in whiter killas, which is generally considered the most productive for copper, whilst the former for lead. They are driving an adit north, which has intersected the south lode, and will take the north lode 40 fms. in depth, in course of which they will also cut other lodes, on which little has been done; the distance from the south to north lode is about 120 fms.; the driving of which is about 50s. per fm.

VALUABLE DISCOVERY.—Two veins of lead ore have been discovered by the men employed at Shallee, under the Board of Public Works, in making a new road to avoid the bad hill of Shallee, which promise to be of great extent and value.—*Nenagh Guardian.*

CANTLOP.—A very fine quarry of red granite has been discovered on the estate of Mr. John Lawrence, of Cantlop, which is likely to prove very advantageous for building purposes, the quality of the stone being remarkably good and firm.—*Shropshire Conservative.*

DIED,—On the 4th inst., at Arras, Monsieur Hallette, civil engineer, member of the Chamber of Deputies. His loss will be severely felt among his private friends, and in the scientific world, in which he held a distinguished position.

THE MINERAL WEALTH OF CARDIGANSHIRE.

TO THE EDITOR OF THE WELSHMAN,

SIR,—As Aberystwyth is the metropolis of the Cardiganshire mining district, you will be doing a great service to your numerous readers in this neighbourhood by copying into the *Welshman* a well written letter in the last *Mining Journal*. As a pendant I have sent you the account of the Cardiganshire mines, written by Lewis Morris, the Welsh antiquary and mineralogist, a century since, which I find in the 2d volume of the *Cambrian Register*, page 495. It is sufficiently encouraging to find two writers, writing a century apart, both uniting in extolling the mineral riches of Cardiganshire: Lewis Morris saying, "this is the richest county I ever knew;" and the correspondent of the *Mining Journal*, a century later, saying in italics—"*No mine in Cardiganshire properly worked, has failed to return high mining profits.*" Mr. Morris further on states, that there were "few clever or ingenious" people in Cardiganshire. I demur to that. He might have said, there were but few educated or cultivated people, but to depreciate the value of a manufactured article from the roughness of the raw material is but poor logic; something like judging of the statue before it is cut out of the block, or a diamond before it is polished. No: give me English schoolmasters for its men, and English capital for its mines, and I will undertake that Cardiganshire's mental wealth will equal its mineral—and both be of a very superior order.

"Full many a gem of purest ray serene,
The dark unfathom'd caves of ocean bear.
Full many a flower is born to blush unseen,
And waste its sweetness on the desert air.

But knowledge to their eyes her ample page,
Rich with the spoil of ages ne'er unroll'd,
Chill penury repressed their noble rage,
And froze the genial current of the soul."

YOUR ABERYSTWITH CORRESPONDENT.

[Here follows the excellent letter of our correspondent, "Geologist," which appeared in the *Mining Journal* of the 13th June.]

CARDIGANSHIRE MINES A CENTURY AGO.—"Since I am arrived so far on my journey, I will tell you a word or two about Cardiganshire: this is the richest county I ever saw, and the one which contains the fewest clever or ingenious people. I know several persons as poor as "John Ben Clyttwr," who have mines of lead ore on their land, and yet they will neither work them themselves or suffer any other person to do so. I am as well convinced as I am in this place, that if some person were to advance me 200*l.*, I would soon make 2000*l.* of them; yes, and for aught I know, 2000*l.* a-year; and what is still more, a great probability of making 12,000*l.* a-year. Who would not venture all one is worth? They have raised at Darren Vawr Hill, near Aberystwith, for some years, 200 tons every quarter of a year, which is 800 tons per annum. The one contains 50 or 60 ounces of silver—some more, some less; and is worth clear on the bank or quay 20*l.* a ton; and 20 *plus* 800 *equals* 16,000*l.*—16,000*l.* a-year; but the charge or expense to be deducted is 4000*l.*, so there is a clear profit of 12,000*l.* —and all within the compass of 200 yards; but the work will last for ages."

PARKHILL MINES—DEAN FOREST.—The extraordinary demand for iron, which has arisen from the extension of the railroad system, and the various new purposes to which the application of that metal is constantly being made, has rendered the iron trade at the present time, and with the certain prospects of long continuance, one of the most profitable of any branch of our productive industry. Among the mineral tracts of the empire, Dean Forest, in Gloucestershire, possesses an intrinsic value, which has for more than a century past been universally acknowledged, and at one period more charcoal iron was made there than in any other part of the kingdom. To capitalists who wish to invest in the iron manufacture, an unusual opportunity now offers through the above mines being now offered on lease, on most favourable terms; or the proprietor would enter into arrangements for the formation of a joint stock company, or the entering into a partnership. These mines possess peculiar advantages over most other mines, where separate leases must be obtained from all the small proprietors of the surface; in the Forest, the minerals are held of the Crown, at a fixed royalty, and a recent Act of Parliament defines the nature and extent of the Crown claims, and the rights of the mine—owners in relation to each other, which precludes all arbitrary or vexatious interference. The South Wales Railway when completed, will not only serve to transport the iron to distant markets, but to promote an interchange between the calcareous iron ores of Dean, and the argillaceous ironstone of South Wales, which may be smelted in combination with great advantage. The Parkhill Level Iron Mine extends 2000 yards by 250, comprising 500,000 yards of superficies, and containing two veins of rich ore, estimated to produce 1,250,000 tons of ore, of 40 per cent. pure iron. There is also a colliery, called the Parkhill Level Colliery, extending 1500 yards by 250, comprising 375,000 square yards, containing four veins, together, 13 ft. 6 in. thick, and calculated to produce 1,000,000 of tons of coal. Two blast furnaces with hot-air being capable of making 8000 tons of pig iron per annum, which the mine would supply for 30 years to come, leaving 17,000 tons per annum for sale; the cost is estimated not to exceed 3*l.* per ton, while the present selling price of Forest pig iron is 5*l.*—shewing a profit of 6000*l.* per annum; and, from the vastly increasing demand, it is highly probable that a still higher price will be the result.

THE LEAD TRADE AT NEWCASTLE.—An important branch of trade has recently arisen in the port of Newcastle, which, from being an exporter only of lead, has latterly become an importer of the article on a large scale. It has been found that Spanish lead can be imported, and, after undergoing the patented process of Mr. H. L. Pattinson, by which the silver is extracted, sent abroad again at a profit. The consequence has been, that large importations have taken place into the port of Newcastle during the last 10 months; and the lead being permitted to be taken from the bond-warehouse to the manufactory, is afterwards returned to the custody of the Customs, and exported as opportunity offers. The quantity of foreign lead imported and warehoused at Newcastle, for the purpose of having the silver extracted, and then exported, was, in the period from August 1845, to June, 1846, inclusive, 2780 tons 8 cwts. There was exported during the same period, under bond, in pigs, 37,034 cwts.; in sheets, pipes, &c., 3187 cwts. Free, in pigs, 23,761 cwts.; in sheets, pipes, &c., 7478 cwts. Litharge, 3474 cwts.; red, 9113 cwts.: and white, 5697 cwts. A table so extensive cannot fail in proving highly beneficial to the district.

MINE ACCIDENTS.

Wheal Leisure Mine, Perran Porth.—A miner, named Trezise, received some shocking injuries by a fall of stone—he underwent an operation afterwards, when seven pieces were extracted from the skull, and also some of the brain.

Wheal Kayle Mine, Phillack.—J. Thomas was dreadfully injured by a fall while ascending the shaft.

Robin Hill Colliery, North Moor, Oldham.—Three men and two boys were severely injured by an explosion of carburetted hydrogen at Messrs. Evans's.

Stonefield Iron-Works, Bilston.—As T. Stanton was filling a blast-furnace, the chain of the balance by which he was suspended broke, and he was precipitated a great depth, and dreadfully injured.

Wolverhampton.—J. Lawton was killed by a fall of coal in a colliery at Shutt End.—W. Capper met a similar fate at Hinckes's Colliery.

Grace Mary Colliery, Warley Hall, near Rowley Regis.—As J. Mackduff was ascending the shaft from a pit belonging to J. E. Piercy, Esq., the skip was drawn over the pulley, which threw the deceased to a great distance, and, from the injuries received, he died the same evening. From the evidence adduced at the coroner's inquest, it appeared that on the skip reaching within 40 yards of the top, a bell rings to give warning to the engineer to check the speed, and it rings twice more before it reaches the mouth of the shaft. G. Hocker, the engineer, was in the ashpit at the time, and unaccountably took no notice of the ringing, nor of the shouts of the victim, but against whom, for his neglectful conduct, the jury returned a verdict of "Manslaughter," and he was committed to Stafford Gaol to take his trial.

Dudley Port Iron-Works, Tipton.—J. Cooper met a shocking fate while employed under one of Messrs. J. and W. Batson's puddlers, named S. Kelly, and that it was his duty, when the latter brought from the furnace a heated ball of iron to be drawn out under the forge-hammer, to remove an iron prop which prevented the hammer from striking the anvil when not used. In the middle of Friday, the 26th ult., Kelly, and another puddler, named Joseph Bate, were trying who should get to the hammer first. It was Bate's turn, but Kelly outran him, and the deceased having pulled the prop from under the hammer, and swung it round upon the ground, as was usual, he laid his ball upon the anvil, and the hammer was beginning to act upon it, when he saw the deceased, who was then standing about two yards off, fall with great violence upon the cogs of the wheel that moved the hammer. His head was instantly forced between the cogs and the upper part of the hammer, dreadfully fracturing his skull, and scattering his brains in every direction. It appeared that, in swinging the prop round, the deceased accidentally brought it so near Bate's legs, as he was standing close behind Kelly, that he had to jump back to avoid being caught by it, for which he struck the deceased upon his breast with his clenched fist in so brutal a manner, that the poor lad staggered and fell backwards upon the hammer. The wheel was immediately stopped, and the mangled corpse of the unfortunate boy conveyed to his residence, at Tipton, where Mr. Henry Hill, surgeon, examined it, and found that the bones of the head and face had been completely fractured, and a portion of the scalp at the back of the head torn away with the brain and some fragments of bone, causing instant death. The above facts having been adduced in evidence at the inquest, Joseph Bate, after caution, stated that it was his turn to go to the hammer, and he was running as hard as he could to get there before Kelly and his boy. As soon as he got there, however, he found the latter removing the prop, which he swung round so carelessly, that it fell between his (Bate's) legs, and he was obliged to jump over it, or it would have struck him. He could not say whether, in springing backwards, he fell against the deceased or not, but, when he regained his balance, he saw him lying upon the hammer, and pulled him away by one of his legs; but it was too late to prevent the awful catastrophe which had been described. The jury then returned a verdict of "Manslaughter against Joseph Bate," who was conveyed in custody to Stafford Gaol, to await his trial.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Bank Stock, 7 per Cent., 208
3 per Cent. Reduced Ann., 96¼ ⅜
3 per Cent. Consols Ann., 95¾ 6
3 per Cent. Annuities, —
3½ per Cent. Ann., 97⅛ ⅜ ⅝
Long Annuities, 16⅞
India Stock, 10½ per Cent., —
3 per Cent. Consols for Acc., 96 95 ⅜
Exchequer Bills, 1000*l.*, 12 14 pm.

Belgian Bonds, 4½ per Cents., 96⅞
Dutch, 2½ per Cent., —
Brazilian, 5 per Cents., 84
Chilian, 3 per Cents., 51½
Mexican, 5 per Cents., 27⅝
Spanish, 5 per Cents., 24⅛ ⅜
Ditto Deferred, —
Portuguese, 5 per Cents., 80
Russian, 5 per Cents., 112

The Stock Exchange has seldom displayed so improving a state as during the past week. Consols and, in fact, every description of Bank Stock and India Stock have had a tendency to a rise, which may be accounted for by the stable formation of the new ministry. The payment of the July dividends, which commenced on Wednesday, has produced no sensible effect on the rate of interest. Money may be said to be easier, without any alteration in the rates of discount. The weekly meeting of the Bank passed off without any change in the minimum rate of interest having been announced; but it was stated that the Bank has taken country bills from brokers at 3½ per cent., instead of 4, hitherto charged. There is no doubt that large sums will be required from the Bank in repayment of railway deposits, as the Accountant-General, on Tuesday signed cheques upon the Bank on this account for no less than 150,000*l.*, and there is no doubt that large additional sums will be applied for. Large sums upon railway bonds have been advanced at 4 and 4½ per cent., which proves that the value of money is increasing. The foreign bonds have been steady, with a slight improvement on last week's quotations.

MINES.—The mining share market still continues in that gloomy state, which has marked it for several weeks past. We had hoped, from the little eagerness manifested during the last two or three days of the past week, to purchase in a few mines—that a pleasing reaction would have taken place; but the same dullness prevails. Perhaps, at no period of our recollection, has a more favourable opportunity ever presented itself for purchasing shares in long paying and profitable mines; whilst numerous others are on the eve of making dividends—thus affording a safe and permanent investment. Transactions in the following mines have been made during the week:—Treleigh, Wheal Concord, Wheal Walter, Lamerhooe Wheal Maria, West Wheal Maria, Fortescue, Mary Ann, West Basset, Wheal Gill, Holmbush, Trewallack, West United Hills; foreign mines—Bolanos and Del Monte.—A good business has been done in the shares of the St. John del Rey Mining Company, at from 10*l.* to 10½*l.* per share. The packet from Rio is now hourly expected, which, it is anticipated, will bring satisfactory news, and a large remittance of gold.

The Share Market has improved for some days past. The bill introduced by Lord Dalhousie, for the purpose of enabling railway companies, while in a state of provisional registration, to dissolve their partnerships, and wind up their affairs, has at last passed into a law. It may be well, therefore, to allude to the circumstances which rendered this Act necessary. The Joint-Stock Companies' Act provided powers for any company, after it had become incorporated as such, to dissolve and wind up its affairs by the vote of a majority of a public meeting of the company. But no provision was made for any such dissolution prior to the incorporation under the Act; that is, while the company remained in a state of provisional registration, such an event not having been contemplated by the bill in question. The consequence of this was, that the contract which bound the parties to apply for an Act and to form a company was, in all respects, a mere private contract for a specific purpose, which could not be changed, altered, or abandoned, without the consent of every individual party to the contract. In companies comprising so many individuals, a compliance with such a requirement was impossible, and, therefore, in reality, no means whatever existed by which the original objects of such companies could be materially altered, or by which they could be dissolved, however desirable it might appear to do so. The present Act is to remove this anomalous impediment; and to enable directors of companies, or the shareholders in certain cases, to call meetings for the purpose of considering such proposals, and to empower such meetings, by a majority of their number, to make such changes from the original plan, or to dissolve the company. It is yet very uncertain to what extent companies will avail themselves of the power under this Act, to get rid of their further liabilities and expenses, by complying with its provisions.

In the House of Lords, the following bills have been declared—*Proved*:—Ashburton, Newton, and South Devon; Blackburn, Clithero, and North-Western; Buckinghamshire (Tring to Banbury); Fleetwood, Preston, and West Riding; Forest of Dean and Gloucester; Glasgow, Airdrie, and Monkland; London and Croydon (Thames Junction); Portbury Pier, &c.; South Wales; Yorkshire and Glasgow Union. *Not proved*: Axholme, Gainsborough, and North Midland); Lesmahagow and Coatbridge; Newcastle and Darlington and Tyne Dock.

In the House of Commons, last night, the following bills were—*Read a third time and passed*:—Birmingham and Oxford Junction Railway; Birmingham and Oxford Junction (Birmingham Extension); Birmingham, Wolverhampton, and Dudley Railway; Birmingham, Wolverhampton, and Stour Valley Railway (Birmingham, Wolverhampton, & Dudley line); Brighouse Sewering, Drainage, and Lighting; Glasgow and Belfast Union Railway; Glasgow, Garnkirk, and Coatbridge Railway and extensions; Larne, Belfast, and Ballymena Railway; Liverpool and Bury Railway; Liverpool and Bury and Manchester and Leeds Railways Amalgamation Bill; Manchester and Leeds Railway Extension; Manchester, Bolton, and Bury Canal Navigation and Railway, and Manchester and Leeds Railway Amalgamation; Monmouthshire Railways; Oldham, Manchester, Liverpool, and Birkenhead Junction Railway; Templemore and Nenagh Railway; Trent Valley, Midland, and Grand Junction.

Second Readings.—The following bills were read a second time:—Australian Agricultural Company; Barr's Estate Bill; Parkes or Yates Estate Bill; and Sligo and Shannon Railway.

Reports.—The following reports were received:—Edinburgh and Glasgow and Forth and Clyde Navigation Junction; Newry, Warrenpoint, and Rostrevor Railway; South Staffordshire Junction Railway (No. 2, Bilston and Priestfield branch); South Staffordshire Junction Railway (No. 3, Snowhill and Portobello branch); and South Staffordshire Junction Railway (No. 4, Willenhall and Bloxwich branch).

The Lords' amendments to the following bills were considered and adopted:—Caledonian Railway (Glasgow, Garnkirk, and Coatbridge Railway branches); East of Fife Railway; Glasgow, Paisley, and Greenock Railway (Pollock and Govan branch); Grand Junction Railway (Huyton and Warrington branch); Manchester, Buxton, Matlock, and Midlands Junction Railway; Manchester Markets; Scottish Central Railway (Crieff branch); Scottish Central Railway (Perth termini and stations); Sheffield, Ashton-under-Lyne, and Manchester Railway (Dukinfield, Worsborough, and Glossop branches, and Sheffield station)

HULL, THURSDAY.—The improvement in the share market, noticed in our last, has been fully maintained during the past week. Amongst the old stocks North British, Hull and Selby, and Prestons, have been in great request at advanced prices. In the better description of scrip lines a very large business has been transacted, particularly in North Staffords, West Ridings, North British Extensions to Carlisle. Matlock's to-day were in demand at 21s. pm.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver bars to Hamburgh	20,900	ounces.
Ditto to Petersburgh	22,000	"
Silver bars to Rotterdam	30,000	"
Silver coin to ditto	38,000	"
Ditto to Sydney	10,000	"

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending July 4, was 19,957; amount of money, £83 3s. 1d.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 13 3—Buddle's West Hartley 15—Carr's Hartley 15—Chester Main 13 6—Davison's West Hartley 15—Dean's Primrose 13—Hastings' Hartley 15—Holywell Main 14 6—New Tanfield 13—North Percy Hartley 14—Oakwellgate Main 13—Original Tanfield 12 6—Ord's Redheugh 13—Ravensworth's West Hartley 14 9—Tanfield Moor 15—Townley 13—West Hartley 15—West Wylam 13 6—Wylam 13 6—Eden Main 14 3 to 14 6—Allerton Main 12—Cowpen Hartley 15—Derwentwater Hartley 14 6—Sidney's Hartley 15—Wall's End Hilda 13—Killingworth 13 6—Wharncliffe 14—East Hetton 14—Haswell 16 3—Hetton 15 6—Lambton 15 3—Pemberton 13 9—Russell's Hetton 15—Shotton 15—Stewart's 15 6—Wearmouth 14 9—Caradoc 14 9—Hartlepool 15 6—Heugh Hall 14—Plummer 15 3—Thornley 14 6—Adelaide 14 6 to 14 9—Brown's Deanery 14—Seymour Tees 14 3—Tees 14 6—West Tees 13 6.—Ships at market, 166; sold, 117; unsold, 49.

WEDNESDAY.—Adair's Main 13 6—Chester Main 13 6—Hastings' Hartley 15 6—Holywell Main 14 9—New Tanfield 13—North Percy Hartley 14—Original Tanfield 12 6—Ord's Redheugh 13—Tanfield Moor 15—Townley 13 6—West Wylam 13 6—Wylam 13 9—Eden Main 14 9—Cowpen Hartley 15 6—Sidney's Hartley 15 6—Wall's End Hilda 14—Wharncliffe 14 3—Braddyll's Hetton 15 6—East Hetton 14 3—Hinchale 13 3—Hetton 15 2—Lambton 15 6—Russell's Hetton 15 3—Stewart's 15 9—Kellee 15 3 to 15 6—Plummer 15 6—South Durham 14—West Tees 13 9.—Ships, 54; sold, 43; unsold, 11.

FRIDAY.—Chester Main 14—Davison's West Hartley 15 9—Hasting's Hartley 15 9—Holywell Main 15 3—Oakwellgate Main 13—Original Tanfield 12 6—Ord's Redheugh 13 6—Ravensworth's West Hartley 15 3—Tanfield Moor 15—West Wylam 14—Wylam 13 9—Eden Main 15 3—Cowpen Hartley 15 9—Derwentwater Hartley 15—Wall's End Hilda 14 3—Killingworth 14 3—Belmont 15 3—Braddyll's Hetton 15 9—East Hetton 14 6 to 14 9—Haswell 16 3—Hetton 15 9—Lambton 15 6—Russell's Hetton 15 3—Richmond 15—Heugh Hall 14 9—Kelloe 15 6 to 15 9—South Durham 14 3—West Tees 14.—Ships at market, 62; sold, 53; unsold, 9.

RAILWAY TRAFFIC.—From our official returns, it appears that the amount of traffic, for the last week, on nearly 1800 miles of railway was 155,373*l.*, thus accounted for:—92,825*l.* for the conveyance of passengers only, 30,589*l.* for the carriage of goods, and a remainder of 31,959*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 17,718*l.*—*Railway Chronicle*, of this day.

RAILWAY SHARE LIST.

RAILWAYS.	Paid	Closing pr. last week.	Closing pr. last night.
Aberdeen	£10	3¼	3¼
Amber, Nottingham, Boston, and Erewash Junction	2½	1	1¼
Armagh, Coleraine, and Portrush—25*l.* shares	1½	—	—
Birmingham and Gloucester—100*l.* shares	100	—	128
Birmingham and Oxford Junction—20*l.* shares	2	—	5
Bristol and Exeter—100*l.* shares	70	82	—
Bristol and Gloucester—50*l.* per share	30	—	—
Caledonian—50*l.* per share	6	9¼	6¼
Cambridge and Lincoln—25*l.* shares	1½	—	—
Chelmsford and Bury	1½	—	—
Chester and Holyhead—50*l.* shares	15	20¾	20¾
Cork and Killarney—50*l.* shares	2½	—	—
Cork and Waterford—25*l.* shares	1½	—	—
Cornwall—50*l.* shares	5	—	—
Derby, Uttoxeter, and Stafford	2½	—	—
Direct Northern—50*l.* shares	2½	1⅞	1⅞
Direct Manchester (Remington's)—20*l.* shares	2½	—	—
Ditto Rastrick's	5½	—	4¼
Dublin and Belfast Junction—50*l.* shares	10	—	—
Dublin, Belfast, and Coleraine—50*l.* shares	2½	—	—
Dublin and Galway—50*l.* shares	4	—	1⅝
Dundalk and Enniskillen—50*l.* shares	7½	—	7 6 dis
Eastern Counties—25*l.* shares	14*l.* 16*s*	24¼	24¼
East Lincolnshire	1½	⅜	⅜
Edinburgh and Glasgow—50*l.* shares	50	—	73¾
Edinburgh and Perth	3	—	—
Exeter, Yeovil, and Dorchester—50*l.* shares	2½	1	3⅜
Goole and Doncaster—20*l.* shares	42*s*	¾ dis.	¾ dis.
Grand Junction—100*l.* shares	100	—	—
Grand Union (Nottingham and Lynn)	1½	⅝	⅝
Great Grimsby and Sheffield—50*l.* shares	5	—	—
Great Southern and Western (Ireland)—50*l.* shares	15	21¼	27¼
Great North of England—100*l.* shares	100	—	229
Great Western—100*l.* shares	80	147½	153
Guildford, Farnham, and Portsmouth—50*l.* shares	5	4¾	5
Hull and Selby—50*l.* shares	50	—	107½
Isle of Axholme	2½	—	—
Lancaster and Carlisle—50*l.* shares	25	—	54
Leeds and Carlisle	2½	—	—
Leicester and Birmingham—20*l.* shares	22*s*	—	¼ dis.
Leicester and Bedford—20*l.* shares	22*s*	—	¾ dis.
Leicester and Tamworth—20*l.* shares	42*s*	1 dis.	—
Liverpool and Leeds Direct—50*l.* shares	2½	—	—
Liverpool, Manchester, and Newcastle Junction	1½	1¼	1¼
London and Birmingham	stock.	222	225
London and Birmingham Extension—25*l.* shares	1½	—	—
London and Blackwall	Av. 16*l.* 13*s* 4*d*	7¾	9⅜
London and Brighton—50*l.* shares	50	65¾	65¾
London and Croydon	Av. 13*l.* 15*s* 9*d*	23⅜	23
London and Greenwich	Av. 12*l.* 15*s* 4*d*	9	9¼
London and South Western	Av. 41*l.* 6*s* 10*d*	78½	78½
London and York—50*l.* shares	2½	1¼	1¼
London, Warwick, and Kidderminster—50*l.* shares	2½	—	—
London, Salisbury, and Yeovil—50*l.* shares	2½	1¼	—
Londonderry and Coleraine—50*l.* shares	2½	—	3
Londonderry and Enniskillen—50*l.* shares	5	—	—
Lynn and Ely—25*l.* shares	15	12¾	13
Lynn and Dereham—25*l.* shares	15	10	11
Manchester and Leeds—100*l.* shares	82	119½	119
Manchester and Birmingham—40*l.* shares	40	—	83½
Manchester, Buxton, and Matlock—20*l.* shares	42*s*	¾ pm.	1 pm.
Manchester and Southampton	2	—	1⅜
Midland	Stock	149	152
Ditto Birmingham and Derby	Stock	122½	124
Midland Great Western (Irish)—50*l.* shares	2½	—	—
Newcastle and Berwick—25*l.* shares	10	25	26
Newcastle and Carlisle—100*l.* shares	100	—	—
Newcastle and Darlington Junction—25*l.* shares	25	—	46
Ditto New (Brandling)—25*l.* shares	20	45½	45
Newport and Abergavenny	2½	—	—
Newry and Enniskillen—50*l.* shares	2½	—	—
Newark, Sheffield, and Boston—25*l.* shares	2½	—	—
North British—25*l.* shares	17½	29⅝	30⅝
North Devon	2	—	1½
Northern and Eastern—50*l.* shares	45	74	—
North Kent and Direct Dover—50*l.* shares	2½	1½	1½
North Staffordshire—20*l.* shares	42*s*	4 pm.	¾ pm.
North Wales—25*l.* shares	3½	—	—
Norwich and Brandon—20*l.* shares	18	—	—
Northampton, Banbury, and Cheltenham	2	—	—
Oxford, Worcester, and Wolverhampton	12½	7¼	7¼
Perth and Inverness	2½	—	—
Portsmouth Direct—50*l.* shares	3½	4¼	4⅜
Preston and Wyre—50*l.* shares	50	—	30½
Richmond—20*l.* shares	5	—	18½
Rugby and Huntingdon—20*l.* shares	2	—	—
Scottish Central—25*l.* shares	7½	15⅝	19
Scottish Midland—25*l.* shares	10	6⅝	6⅝
Sheffield and Manchester—100*l.* shares	100	—	—
Shrewsbury and Birmingham	2½	2¼	2½
Somersetshire Midland	2½	—	—
South Devon—50*l.* shares	25	—	33
South Eastern and Dover	Av. 33*l.* 2*s* 4*d*	40½	42½
South Midland—20*l.* shares	42*s*	¾ dis.	¾ dis.
South Wales—50*l.* shares	5	1⅝	1½
Staines and Richmond—20*l.* shares	1	¼	—
Trent Valley—20*l.* shares	5	—	2
Trent Valley and Holyhead Junction—20*l.* shares	2½	—	1⅞
Vale of Neath	2	1½	1
Waterford and Kilkenny—20*l.* shares	3	—	—
Welsh Midland	2½	1	⅞
Wilts, Somerset, and Weymouth—50*l.* shares	5	5 dis.	4½ dis.
Yarmouth and Norwich—20*l.* shares	20	—	—
York and Carlisle	2½	1½	⅞
York and North Midland—50*l.* shares	50	98½	99
Ditto Selby—50*l.* shares	30	73½	75½
FOREIGN RAILWAYS.			
Boulogne and Amiens—20*l.* shares	10	19⅝	—
Bordeaux and Toulouse and Cette (Mackenzie)—20*l.* shares	2	—	1⅝
Bordeaux, Toulouse, and Cette (Espalete)—20*l.* shares	2	—	1⅜
Central of Spain—20*l.* shares	2	1⅛	1
Dutch Rhenish—20*l.* shares	5	7⅜	7⅜
East Indian	¾	¾	¾
Great Northern of France (constituted)	5	13⅜	—
Great Western Bengal	¾	—	—
Great Western Canada—22½*l.* shares	3¾	—	—
Jamaica and South Midland Junction—20*l.* shares	1	—	—
Jamaica North Midland	1	—	—
Louvaine and Jemappe—20*l.* shares	4	⅜	⅜
Lyons and Avignon—20*l.* shares	2	1⅝	1⅝
Luxembourg	4	1⅞	2⅛
Namur and Liege—20*l.* shares	4	3⅜	3½
Orleans and Vierzon—20*l.* shares	10	—	15½
Orleans and Bordeaux—20*l.* shares	6	9½	9½
Paris and St. Quentin—20*l.* per share	2	—	—
Paris and Orleans—20*l.* shares	20	—	—
Paris and Rouen—20*l.* shares	20	—	38⅝
Rouen and Havre—20*l.* shares	18	—	28⅝
Sambre and Meuse—20*l.* shares	6	4⅜	4½
Strasburg and Basle—14*l.* shares	14	—	28½
West Flanders	4	3½	3⅝

* Prices obtained from country brokers—no business doing in the London market.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1846	1845
Arbroath and Forfar	15	£140,782	3½ p.c.	£234 0 0	£230
Chester and Birkenhead	15	589,632	2½	684 6 1	694
Dublin and Drogheda	32	631,258	4	862 16 9	880
Dublin and Kingstown	6	349,736	9	1946 9 2	1489
Dundee and Arbroath	17	153,508	6	374 15 5½	344
Durham and Sunderland	19	302,118	2	524 3 2	714
E. Counties & North. & East.	124½	4,090,328	5	10003 13 5	5214
Edinburgh and Glasgow	46	1,686,226	6	3324 11 11	2707
Glasgow, Paisley, and Ayr	51	1,104,773	6	2112 13 8	1873
Glasgow, Paisley, & Greenock	23	806,134	2	1208 16 0	1177
Grand Junction Company *	119	2,597,317	10	——	10620
Gravesend and Rochester	7	85,000	—	395 11 7	289
Great North of England	45	1,296,196	6	——	—
Great Western	240	8,179,980	8	21696 6 1	18631
Hartlepool	—	—	—	874 18 1½	—
London and Birmingham†	176	7,417,217	10	40291 1 3	20544
London and Blackwall	4	1,078,851	1½	1526 3 2	1488
London and Brighton	69	2,653,673	7	6910 16 11	5224
London and Croydon	10	842,592	3½	1942 0 3	1826
London and South-Western	93	2,620,724	10½	8299 11 5	9062
Manchester and Birmingham	85	2,197,585	6	4547 10 1	3928
Manchester & Leeds	61	3,972,869	8	6911 7 5	6941
Manchester, Bolton, & Bury	10	842,725	6½	1202 12 7½	1008
Midland Company	169	6,636,105	6	17251 18 6	12377
Newcastle and Carlisle	65	1,137,386	5	2641 13 0	2124
Newcastle and Darlington	22½	1,272,631	2	2935 12 11	2703
Newcastle and North Shields	7	316,869	5	——	595
Norfolk	59	573,818	5	2076 17 5	424
North Union, Bolton & ‡	32	1,000,551	6½	691 0 0	1318
Preston and Wyre	22	423,014	2	1060 9 4	734
Sheffield and Manchester	41	1,313,225	2½	1887 13 10	815
South-Eastern and Dover§	103	4,984,924	3½	9240 11 2	6433
Taff Vale	30	648,348	5	1209 0 1	1052
Ulster	95	356,253	3½	577 17 3	560
Yarmouth and Norwich‖	20½	250,037	—	——	425
York and North Midland	53	3,632,859	10	5811 7 4	3864
Paris and Orleans	82	2,082,916	9	7653 3 6	6086
Paris and Rouen	84	1,998,306	9	6578 0 0	5944

* The traffic return of this company is now included in the London and Birmingham
† Including the Grand Junction Company. ‡ Including the Greenwich line.
§ Included in the Manchester and Leeds. ‖ Included in Eastern Counties

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1024	Alfred Consols	3¼	30
235	Andrew and Nangiles	25½	30
1000	Barristown	4½	27½
4000	Bedford	2½	3½
128	Besore Lead Mine	—	37½
320	Birch Tor Tin Mine	10½	12
8000	Blaenavon	50	40
256	Bodwannick	3	5
400	Botallack	175	200
120	Brewer	—	10
10000	British Iron, New, regis.	10	19
—	Ditto ditto, scrip	10	19
128	Budnick Consols	—	30
100	Bwlch Cwmerfin	20	200
1000	Callington	19	25
256	Caradon Consols	45	55
256	Caradon Copper Mine	9½	8
256	Caradon Mines	15	40
256	Caradon United	24	16-25
256	Caradon Wh. Hooper	12	7
1000	Carn Brea	15	110
114	Charlestown	—	200
235	Chypraze	—	20
1900	Coombmartin	5½	4½
128	Comfort	—	50
5000	Con. Tretoil Mining Ass.	3½	2½
128	Condurrow	31	56
2560	Cook's Kitchen	—	6
1000	Copper Bottom	1	5
3209	Cornubian Lead Co.	3	—
1024	Cosheen	4½	25
240	Craddock Moor	9	30
128	Creeg Braws	120	80
500	Cubert Mine	11	30
1024	Devon & Courtney Con.	3	3½
1000	Dhurode	2	5
186	Dolcoath	—	80
10000	Durham County Coal	45	9
128	East Pool	5	35
9000	East Tamar Consols	1½	3
—	East Wheal Albert	1	3
94	East Wheal Crofty	—	290
256	East Wheal Kitty	¼	¼
128	East Wheal Rose	50	1300
123	East Wheal Seton	2½	15
512	Fowey Consols	—	40
20000	Galvanised Iron Co.	10	10
10000	Gen. Mining Co. for Irel.	½	¾
1000	Godolphin	—	35
256	Gonamena	19	118
128	Gover	23	200
244½	Grambler & St. Aubyn	—	30
100	Great Consols	1000	400
256	Great Calestick Moors	—	13
2560	Great Mitchel Consols	—	2
128	Great Resugger Moor	1	—
100	Grogwinion	5	20
1000	Gunnis Lake	1½	3
128	Hallenbeagle	—	50
1000	Hanson	5	1
4000	Harrowbarrow Old Mine	3½	4
1000	Harrowbarrow Consols	2	1½
800	Hawkmoor	3	4
6000	Helgasten Down Con.	1	2
256	Herodsfoot	19	12
10000	Hibernian	12½	1
1000	Holmbush	14	14
256	Ivy Tor	1½	2½
1200	Kirkcudbrightshire	1½	¾
2048	Lamerhooe Wh. Maria	7	5½
128	Lanarth & Penstruthal	—	150
2048	Lanivet Consols	2	4½
200	Larkholes	1	3
160	Levant	—	120
1000	Lewis	12	1½
1280	Llancynfelin	5	15
128	Lndcott	3	3
2600	Marke Valley	10	3½
5000	Mendip Hills	1½	1½
20000	Mining Co. of Ireland	7	12½
1000	Nant-A'r-Nelle	2	2½
200	Nanterrow Consols	10½	16
128	New East Crowndale	7½	2
128	North Fowey Consols	10	25
100	North Pool	11	40
70	North Roskear	10½	350
256	North Treburget	2½	4
100	North United	41	20
256	North Wh. Leisure	1½	6
128	North Wh. Providence	2½	10
256	North Wheal Rose	26½	25
15000	Northern Coal Co.	23	2
600	Old Delabole Slate Co.	25	45
128	Par Consols	—	900
256	Penhallow Moor	15	5
100	Penrhiw	30	65
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	—	60
512	Plymouth Wh. Yeoland	1½	3½
10000	Rhymney Iron	50	25
256	Rose Consols	10	7
1000	Rosewall Hill	1	3½
1024	Roscarrock	2½	—
2500	Silver Valley	3	3
256	Sourton Consols	3½	5
128	South Caradon	10	400
2300	South Daleoath	2	—
260	South St. George	9½	10
200	South Harvaanah	23	25
800	South Towan	10	1½
256	South Trelawney	8½	16
128	South Yeoland	16½	20
128	South Wheal Basset	—	180
124	South Wh. Francis	—	70

BRITISH MINES—*continued.*

Shares.	Company.	Paid	Price.
256	South Wh. Hope	—	5
1034	South Wh. Maria	—	2
256	South Wheal Rose	2	3
10000	Southern & Western, Irish	1	2
256	St. Austell Consols	7	20
94	St. Ives Consols	—	600
1000	Stray Park	43	22
9600	Tamar Consols	3	5
6000	Tincroft	7	10½
256	Ting Tang	67	25
128	Tokenbury	124	33
1024	Trelawney Consols	1½	1½
5000	Treleigh Consols	6	4
256	Trenow Consols	—	170
96	Tresavean	10	230
120	Trethellan	5	40
120	Treviskey and Barrier	61	120
256	Trewallack	—	30
128	Trewellard	12	25½
4000	United Hills	5	3½
100	United Mines	300	800
128	West Basset	10	15
256	West Caradon	20	340
128	West Cargoll	2	15
512	West Fowey Consols	40	25
—	West Kekewich Consols	—	3½
256	Wheal Kekewich	4	8
256	West Providence	—	12
200	West Seton	—	47½
120	West Trethellan	5	32
256	West United Hills	1½	14
256	West Wh. Friendship	5	10
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	½	3
2560	West Wh. Mitchell	—	2
256	West Wheal Shepherd	—	16
256	West Wheal Tolgus	21½	17
256	West Wheal Treasury	12	5
240	Westerlake	3	3
6000	Wicklow Copper	5	16½
256	Wheal Albert	10	8
128	Wheal Acland	13	10
256	Wheal Allen	½	4
368	Wheal Anderton	10½	11½
128	Wheal Ann	—	50
256	Wheal Blencowe	—	20
256	Wheal Boscastle	3½	9
256	Wheal Bian Consols	½	3
128	Wheal Catherine	5½	1½
256	Wheal Cleveland	2½	2½
136	Wheal Clifford	—	200
1024	Wheal Concord	3½	5½
256	Wheal Fortescue	4½	12
256	Wheal Frederick	3	20
384	Wheal Franco	22	25
256	Wheal Gill	17½	35
1000	Wheal Harriet	1	—
128	Wheal Henry	—	5
109	Wheal Hope (Zeunor)	23	25
256	Wheal Hope	7	1½
256	Wheal Jane	6	40
265	Wheal Kendall	11½	5
1024	Wheal Maria	1	700
4000	Wheal Martha Consols	4	3
256	Wheal Mary Ann	5	100
1024	Wheal Mary (Calstock)	2½	1½
256	Wheal Mary Consols	15	15
256	Wheal Mexico	5	5
256	Wheal Mary Lanivet	2½	20
256	Wheal Norris	9	9½
128	Wheal Penrose	—	5
128	Wheal Pollard	11½	12
128	Wheal Prospect	4	9
128	Wheal Providence	34	40
128	Wheal Reeth	1	60
256	Wheal Robins	13	2
128	Wheal Rose	40	25
256	Wheal Salusbury	13	5
512	Wheal Sarah	2½	5
99	Wheal Seton	150	900
1024	Shearal	1½	8
256	Wheal Sisters	25½	35
128	Wheal St. Cleer	21½	22
260	Wheal Trelawney	7½	135
256	Wheal Trevenna	3½	4
256	Wheal Trewennan	—	10
128	Wheal Venland	12½	20
256	Wheal Victoria	2	6
127	Wheal Virgin	—	50*
1024	Wheal Walter	3	4
256	Wheal Williams	2	20

FOREIGN MINES.

Shares.	Company.	Paid	Price.
5000	Alten Mining Company	14½	1½
15000	Asturian Mining Co.	6	3
10000	Anglo-Mexican Co.	100	3
3374	Ditto Subscription	25	4
2000	Bolanos	150	5
12000	Ditto Scrip	15	5
10000	Brazilian Imperial	20	4
12000	Cobre Copper Co.	40	29
8500	Colombian Co. regis.	55	4½
5000	Ditto Scrip	—	
10000	Copiapo Mining Co.	14	2
20000	General Mining Ass'n.	20	15
5051	Mexican Company	59	5
12000	Mocaubas & Cocaes	25	8½
29320	El del Monte, regis. / Ditto unregistered	28½	av. 3½
	Ditto Red Debentures	—	19
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	117
7000	Royal Santiago	10	20
2000	Pachuca Mines	3	3½
11000	St. John del Rey	15	10½
43174	United Mexican	28½	3½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, JULY 2, 1845.

	£	s.	£	s.	d.
IRON—Bar *a*..Wales...*ton*	0	0	8	0	0
„ ..London ..	0	0	9	0	0
Nail rods „	0	0	10	0	0
Hoop(Staf.) „	11	0	11	5	0
Sheet „ „	0	0	12	10	0
Bars „ „	10	10	11	0	0
Rails, average	9	10	10	0	0
Welsh cold-blast foundry pig ..	4	10	4	15	0
Scotch pig *b*, Clyde	3	10	3	12	0
Russian, CCND *c*..	0	0	—		
„ PSI	0	0	—		
„ Gourieff	14	5	14	10	0
„ Archangel	0	0	13	12	6
Swedish *d*, on the spot	0	0	11	10	0
„ Steel, fagt.	0	0	15	10	0
„ „ kegse	14	0	14	5	0
COPPER—Tile *f*	0	0	92	0	0
Tough cake	0	0	93	0	0
Best selected	0	0	96	0	0

	£	s.	£	s.	d.
COPPER—Ordin. sheets, *lb.*	0	0	—	0	10½
„ bottoms .	0	0	—	0	11½
TIN—Com. blocks *g*...*cwt.*	0	0	4	12	0
„ bars	0	0	4	13	6
Refined	0	0	4	15	0
Straits *h*	4	11	4	12	0
Banca	4	13	4	14	0
TIN PLATES—Ch., IC *i*, *box*	1	9	1	10	0
„ IX	1	15	1	16	0
Coke, IC	1	4	6	1	5
„ IX	1	10	6	1	11
LEAD—Sheet *k* .....*ton*	19	15	—20	0	0
Pig, refined	0	0	—21	0	0
„ common	0	0	—19	0	0
„ Spanish, in bd.	18	0	—18	0	0
„ American	0	0	—		
SPELTER—(Cake) *l*	0	0	—18	5	0
ZINC—(Sheet) *m* export.*	28	0	—30	0	0
QUICKSILVER *n* .....*lb.*	0	0	— 0	4	6
REFINED METAL ....*ton*	4	15	— 5	0	0

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto. *e* In kegs ¾ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash, in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

IRON.—At the quarterly meeting of the Staffordshire masters yesterday, at Birmingham, it was unanimously resolved to maintain the previous prices. Welsh is firm, but not much doing; Scotch pig is higher, and several large sales have been made this week at 67s. 6d. for mixed numbers, and at 70s. to 71s. for No. 1.

TIN.—English remains nominally the same; but smelters will not sell, except subject to a price to be fixed, which, of course, prevents business—a further rise is, consequently, looked for. Foreign is firmer, and many sales have been made this week at quotations.

TIN PLATES are more in request.

SPELTER is very dull; in other metals no alterations to quote in prices, nor any particular remarks to make.

[*Communicated by Messrs. Whitcomb and Barton, Old Broad-street.*]

In English iron the demand for bars has considerably improved this week, and prices are looking up. In Scotch pigs large transactions have taken place at 67s. 6d., 68s. 6d., 69s. 6d., to 70s. cash, and 72s. 6d. three months' bill. Welsh pig-iron has also participated in the general improvement—extensive sales having been made within the last few days at advanced rates. Staffordshire continues firm. A meeting was held at Birmingham yesterday, when it was resolved to maintain last quarter day's prices, at which large orders were taken. Foreign iron and steel not much inquired for. English copper, as also English lead, steady at quotations. American lead is held for 18*l.* English and Foreign Tin continues in good demand. A sale of Banca is reported at 94s. 6d. per cwt. Tin plates dull of sale, but holders are not disposed to sell under 20s. for I. C. coke. In spelter no business doing; price asked, 18*l.* 5s.

[*From a Correspondent.*]

Spelter has been very dull during the week, scarcely a sale reported; sellers at 18*l.* 5s. on the spot.—Quicksilver dull of sale.—English iron continues firm at quotations, with a fair business doing. The quarterly meeting of ironmasters took place yesterday, at Birmingham. A very good business was done in all descriptions of iron, at last quarter day's prices, and the makers determined to maintain present prices. In Welsh pig-iron considerable business was done during the week, at improved prices, and makers are now asking higher rates. Scotch pig-iron has been sold extensively in Glasgow, Liverpool, and here, during the week at improved prices, and the market may be fairly quoted 69s. to 70s. for mixed Nos., and 71s. to 72s. for No. 1 at Glasgow. Swedish iron and steel continue dull.—English copper and tin remain firm at quotations. Holders of Banca are asking 94s., and Straits 91s. to 92s. Tin plates are improving. English pig-lead is unaltered. Spanish to arrive is offering at 18*l.*, and for American, lying at Liverpool, 17*l.* 10s. per ton is asked.

GLASGOW PIG-IRON TRADE.

JULY 4.—The price of Scotch pig-iron, delivered free on board here, may be quoted to-day at 67s. 6d. to 68s. 6d. for No. 1, and at 63s. 6d. to 64s. for No. 3, per ton, net cash. Towards the close of the week our market assumed a firmer aspect, and extensive sales have been made at the following prices—67s., 67s. 6d., and 68s., for No. 1; 63s. 6d. and 64s. for No. 3; 65s. 6d. for half No. 1, and half No. 3, net cash; 67s. and 68s., with a small deposit for three and four months' delivery, for 3-5ths No. 1 and 2-5ths for No. 3.

It is understood by those best acquainted with the trade, that either next packet, or the following one, will bring news of the American Government having reduced their duty on British pig-iron to the extent of 8*l* a ton—equal to 16s. per ton—and that measures are in progress for a reduction of the French duty on the same article. These circumstances, coupled with the unusually short supply in consumers' hands, give every reason to expect an immediate advance on the price of this article.—*National.*

JULY 7.—To-day the market closed at a slight advance.

DUTY OFF COPPER IN PRUSSIA.—His Majesty the King of Prussia has issued a Royal Ordinance, allowing the importation of sheet copper and copper nails from foreign parts, free of duty, into the ports of Prussia, for the purpose of sheathing and fastening the steamers now building to run across the Atlantic, which are to touch England, America, the West Indies, and the Brazils—they are to be large splendid vessels.

IRON TRADE IN FRANCE AND ENGLAND.—In 1822 France produced 225,000 tons cast iron, and 143,000 tons bar and other iron; six coal mines produced about 1,968,000 tons of coal annually. In 1832 these products were almost the same. In 1842, however, there were produced about 400,000 tons of cast iron, 284,824 tons of bar iron, and 3,592,000 tons of coal. In 1815 France produced only 800,000 tons of coal, and imported but 166,000 tons, while she now imports 1,670,000 tons. It thus appears, that in 30 years, the consumption of this important combustible has been more than quintupled. Of cast iron, England produced, in 1842, 1,000,000 tons; in 1839, 1,343,000 tons; and in 1843, 1,215,000 tons. In 1843, the Zollverein, or German Customs Union, produced 210,000 tons of pig iron. The United States of America produced, in 1841, 287,000 tons of cast iron, and 197,000 tons of bar and other iron; previous to 1830 these states scarcely produced 32,000 tons of iron.

COPPER ORES.

Sampled June 24, and Sold at Andrew's Hotel, Redruth, July 9, 1846.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
Carn Brea	102	£6 16 6	Wh. Friendship	26	£2 6 6
ditto	85	6 17 6	Treaow Consols	60	7 3 6
ditto	81	4 8 0	ditto	31	6 12 6
ditto	80	4 14 6	ditto	21	3 9 6
ditto	76	6 4 6	ditto	11	3 19 6
ditto	50	7 4 6	West Wh. Jewel	58	2 9 0
ditto	47	5 10 6	ditto	34	4 11 6
ditto	39	4 10 0	West Wh. Treasury	43	8 14 0
ditto	22	1 17 0	ditto	59	3 17 0
ditto	3	18 2 0	Providence Mines	26	4 3 6
Par Consols	107	4 6 0	ditto	16	1 2 6
ditto	83	6 7 0	Wh. Rodney	34	3 4 0
ditto	82	6 0 0	ditto	7	6 11 0
United Hills	82	3 9 6	Wh. St. Andrew	37	0 15 6
ditto	73	3 10 0	Carn Perran	18	3 17 0
ditto	62	4 16 0	ditto	13	4 12 6
ditto	41	4 1 6	Wh. Trenwith	28	5 7 6
Levant	86	5 16 0	North Wh. Basset	22	4 7 0
ditto	76	5 9 0	Wh. Buller	16	4 16 0
ditto	60	7 6 6	ditto	3	3 9 6
Wh. Seton	111	6 2 0	Wh. Union	8	9 17 6
ditto	100	7 4 6	Wh. Brook	6	11 1 0
Wh. Prosper	69	7 16 6	Relistian	5	5 0 6
ditto	54	4 19 0	Wh. Plenty	4	6 6 0
ditto	52	2 10 0			

TOTAL PRODUCE.

Carn Brea Mines	580	£3379	9	0	Wh. Rodney	41	£154 13 0
Par Consols	272	1479	3	0	Wh. St. Andrew	37	28 13 6
United Hills	258	1003	2	6	Carn Perran	31	129 8 6
Levant	222	1352	10	0	Wh. Trenwith	28	150 10 0
Wh. Seton	211	1399	12	0	North Wh. Basset	22	95 14 0
Wh. Prosper	201	997	18	6	Wh. Buller	19	87 4 6
Wh. Friendship					Wh. Union	8	79 0 0
Trenow Consols	123	752	11	6	Wh. Brook	6	66 6 0
West Wh. Jewel	92	297	13	0	Relistian	5	25 2 6
West Wh. Treasury	82	524	5	0	Wh. Plenty	4	25 4 0
Providence Mines	42	126	11	0			

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	213	£1410 13 6
English Copper	311½	1507 6 3
Vivian and Sons	499½	2692 0 6
Freeman and Co.	479	2153 8 6
Grenfell and Sons	221	1384 2 0
Sims, Willyams, and Co.	268½	1739 1 0
Williams, Foster, and Co.	296½	1269 14 9
Total tons	2289	£12,156 6 6

Average standard, 98*l.* 13s.—Average produce, 8½.—Average price per ton, 5*l.* 5s.—Quantity of ore, 2289 tons.—Quantity of fine copper, 187 tons.—Amount of money, 12,156*l.* 6s. 6d.—Average standard of last sale, 104*l.* 10s. 0d.—Average produce ditto 7½.

NO SALE on Thursday next, July 16.

Copper ores for sale on Thursday week, at Pearce's Hotel, Truro.—Mines and Parcels—Devonshire Great Consols, Wheal Maria, and Wheal Fanny 1277—Tresavean 487—West Caradon 346—Poldice 352—Fowey Consols 309—Wh. Lydia & South Towan 269—Grambler and St. Aubyn 233—Hallenbeagle 200—Treviskey 169—Wheal Jewel 122—Barrier 107—Holmbush 105—Bedford United 91—Ting Tang Consols 74—Wheal Maiden 68—Wheal Comfort 55—West Grambler 13.—Total, 4257 tons.

QUARTERLY SALE OF COPPER ORES IN CORNWALL.—To JUNE 30.

Copper ores, 38,232 (21 cwts).—Fine copper, 3033 tons 3 cwts.—Amount of money, 200,810*l.* 11s. 6d.—Average standard, 100*l.* 17s.—Average produce, 7¾ and 1-16th.—Average price per ton, 5*l.* 5s.

COPPER ORES

Sampled June 17, and Sold at Swansea, July 8, 1846.

Mines.	Tons.	Prod.	Stand.	Price.	Mines.	Tons.	Prod.	Stand.	Price.
Cobre	100	12½	85	£8 14 0	Kapunda	66	30½	83	£22 16 0
ditto	99	12½	87½	9 1 0	ditto	42	23½	85	17 10 6
ditto	97	12½	85	8 12 0	ditto	70	23½	84½	17 12 6
ditto	82	12½	85	8 12 0	ditto	6	22½	83½	16 6 6
ditto	57	22½	82	16 4 6	ditto	4	25½	83½	19 4 0
ditto	45	23½	79½	16 13 0	ditto	2	23½	82½	17 4 0
Cuba	110	12½	86	8 10 0	ditto	1	23	83½	17 0 0
ditto	100	12½	85½	8 9 0	ditto	13	23½	83	17 3 0
ditto	95	12½	87½	8 9 0	ditto	7	23½	82½	17 1 0
ditto	90	12½	87½	8 9 0	Tigrony	58	5½	106	3 11 6
ditto	63	12½	86½	8 10 6	ditto	18	4½	106	2 5 0
Berehaven	123	9½	96	7 2 0	ditto	1	46	67½	29 0 0
Ditto Kellogue	122	9½	96	7 2 0	Cronebane	30	6	104½	4 0 6
Berehaven	104	9½	96	7 2 0	ditto	23	5½	104½	3 5 0
ditto	99	9½	96	7 4 6	ditto	1	44	69	28 0 0
Ballymurtagh	90	6½	103½	4 2 0	Llandidno	42	10½	97½	7 12 0
ditto	58	3	125	1 10 0	ditto	39	4½	114½	3 4 6
ditto	52	5½	109	3 9 6	Burra Burra	32	14½	88½	10 16 0
ditto	50	9½	127½	1 5 0	ditto	25	40½	81½	30 11 0
ditto	45	2½	130½	1 10 0	Vine Slag	20	5	102	2 17 0
ditto	43	6½	102	4 5 0	ditto	15	3½	110½	1 18 0
Knockmahon	86	11½	93½	8 14 0	Dhurode	30	9½	94	7 0 6
ditto	71	11	93½	8 0 0	Burra Burra	19	41½	81½	31 9 0
ditto	59	9½	94½	6 19 0	ditto	9	30	82½	22 9 0
ditto	57	6½	103½	4 7 0	Gloster Slag	15	8	94½	5 6 0
ditto	52	4½	108½	2 10 0					

TOTAL PRODUCE.

Cobre	480	£4979	8	6	Cronebane	54	£223 10 0
Cuba	458	3880	6	6	Llandidno	81	444 0 0
Berehaven	448	3193	3	6	Burra Burra	57	1109 7 0
Ballymurtagh	338	949	9	0	Vine Slag	35	85 10 0
Knockmahon	325	2104	4	0	Dhurode	30	210 15 0
Kapunda	211	4042	18	0	Burra Burra	28	799 12 0
Tigrony	77	276	17	0	Gloster Slag	15	79 10 0

Total tons, 2637.—Total amount, £22,378 10s. 6d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	400½	£5823 3 6
Freeman and Co.	146	856 9 0
Crown Copper Company	22½	33 15 0
Sims, Willyams, Nevill, Druce, and Co.	370½	2539 5 6
Vivian and Sons	605½	4877 13 6
Williams, Foster, and Co.	1092	8248 4 0
Totals	tons 2637	£22,378 10 6

Copper Ores for Sale, July 22.—Cobre 80, ditto 76, ditto 70, ditto 65, ditto 53, ditto 52, ditto 51, ditto 43—Santiago 120, ditto 111, ditto 107, ditto 100—Bearhaven 126, ditto 123, ditto 105—Victoria 112, ditto 95, ditto 70, ditto 26—Kapunda 96, ditto 80, ditto 76, ditto 48—Ballymurtagh 78, ditto 64, ditto 49, ditto 40, ditto 38, ditto 18, ditto 2—Cuba 100, ditto, 36, ditto 66, ditto 45—Knockmahon 93, ditto 63, ditto 62, ditto 41—Montacute 58, ditto 37—Cosheen 24, ditto 22—Lackamore 30, ditto 2—Kaw-aw 14, ditto 10.—total 2877.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold in bars .... per oz.	£3 17 9	New dollars ..... per oz.	£0 4 9½
„ „ Portugal pieces	3 17 5	Silver in bars (Standard)	0 4 11½

LAMHEROOE WHEAL MARIA (LEAD & COPPER) MINE IN 2048 SHARES.

WHEAL CONCORD SILVER-LEAD MINE: 1024 shares.
WHEAL MARY COPPER MINE (Calstock): 1024 shares.
WHEAL WALTER LEAD AND COPPER MINE: 1024 shares.
LOSTWITHIEL CONSOLS COPPER MINE: 1024 shares.
WHEAL WEEKES: 1024 shares.

The BUSINESS of the ABOVE MINES (now in operation on the cost-book system) is conducted at No. 4, KING-STREET, CHEAPSIDE, LONDON, where all INFORMATION respecting them, and the value of the shares, may be obtained.

Specimens from each mine may also be inspected.

WHEAL KELLY LEAD AND COPPER MINE (Devon): 2048 shares. 38
PRINCE EDWARD LEAD AND COPPER MINE (Cornwall): 2048 shares.
COSHEEN COPPER MINE (county of Cork, Ireland): 1024 shares.
ARDTULLY COPPER AND SILVER-LEAD MINES (county of Kerry, Ireland): 3300 shares.
WHEAL HOLWELL: 2048 shares.

SHARES in the five last-mentioned mines TO BE DISPOSED OF. Some splendid specimens of ore from Cosheen and Ardtully have just been taken from the different lodes.

Dated July 4, 1846. JAMES CROFTS, Secretary.

EUROPEAN GAS COMPANY, 39, Finsbury-circus, London, July 9, 1846.—The directors hereby give Notice, that a CALL of FIVE POUNDS per share on the Preference Shares is required to be PAID, on or before Thursday, the 10th day of September next, at the banking-house of Messrs. Glyn, Halifax, and Co., Lombard-street, London, pursuant to the provisions of the Deed of Settlement. 39

By order of the board, J. B. GREAVES.

BEARD'S COLOURED PHOTOGRAPHIC PORTRAITS are taken daily at 85, King William-street, City (where applications for licenses should be made); 34, Parliament-street, Westminster; and the Royal Polytechnic Institution, Regent-street.—"The likenesses now obtained—besides their unfailing correctness—have all the brilliancy and boldness of effect which can be imparted by the most accomplished artist."—*Mining Journal*, April 25, 1846. 40

Now ready, in 1 vol., post 8vo., price 10s. 6d.,

MANUAL OF PRACTICAL ASSAYING: intended for the USE OF METALLURGISTS, CAPTAINS OF MINES, AND ASSAYERS IN GENERAL, with a copious Table, for the purpose of ascertaining, in assays of gold and silver, the precise amount, in ounces, pennyweights, and grains, of noble metal contained in one ton of ore, from a given quantity.

By JOHN MITCHELL, Member of the Chemical Society.
London: H. Baillière, publisher, 219, Regent-street. 41

THE ARTISAN CLUB ON THE STEAM-ENGINE.

Now ready, in 1 vol., 4to., with 30 steel plates, and 349 Wood Engravings, 27s., cloth.

A TREATISE ON THE STEAM-ENGINE, in its Application to Mines, Mills, Steam Navigation, and Railways. By the ARTISAN CLUB.
Edited by JOHN BOURNE, C.E.

*** Subscribers are requested to complete their setts.
London: Longman, Brown, Green, and Longmans. 42

Just published,

AN EXPOSITION OF THE DANGERS AND DEFICIENCIES OF THE PRESENT SYSTEM OF RAILWAY CONSTRUCTION, with SUGGESTIONS FOR ITS IMPROVEMENT. By C. H. GREENHOW.
John Weale, 59, High Holborn.
Models, illustrating the principle, may be seen at No. 3, Lothbury. 43

NOTICES TO CORRESPONDENTS.

A. C. (Cheapside).—The report shall appear, if possible, in our next Journal.

THE MINING JOURNAL

And Atmospheric Railway Gazette.

LONDON, JULY 11, 1846.

It is at least a possibility, that to some dwelling in the most rural and mining districts of the kingdom, this Journal may be the first to announce the retirement from office, during the past week, of a Government, nominally Conservative, and the accession to power of a Ministry, essentially Liberal, in its character. We occasionally err in placing low in the scale of secondary causes, the action and influence of Governments on the interest of society. True it is—universally true—that in every nation determined to serve itself, no Government can be absolutely repressive; for, in the absence of such determination, can any Government materially deepen or widen the circle of public blessings. But, though their operation is happily limited, still they have an operation tangible and distinct enough, on the growth of all great principles, political, economical, or domestic. There are two wants which have hitherto pressed heavily on the labouring population of these lands—to wit, the want of cheaper food, and of higher wages. An efficient step taken in respect of either affects both

tations are taken—particularly the latter part of it, where Sir ROBERT clearly shows, that, by the economizing of the fuel, which can be done by the mode he describes, nearly one-half the expense will be saved. A company, therefore, commencing a work of such importance, will take advantage of all the latest improvements made, both in England and on the continent.

We fully anticipate that Ireland will not only keep at home the million sterling she pays England for iron, but receive a much larger sum from us, for an article we cannot do without,—and which, for want of peat or charcoal, we cannot manufacture. When it is recollected that such iron as Ireland can produce, is what should always be used in the building of carriages,—and that the breakage of a single axletree of one of the thousands that daily run on our railroads, may be the cause of great loss of life, and injury to the passengers—we ought to rejoice that our sister country will have it in her power to render us essential services in so important a point, and, we expect, on better terms than we can now import it from the Baltic; but doubly ought we to rejoice, to find the large sums now paid for foreign iron, will be spent in that portion of our own country, where (we are persuaded) the want of employment has been the chief cause of the crime, misfortune, and poverty, that have so long disgraced Ireland. We spoke in our last of the services Mr. DILLON CROKER had rendered to his native country—we then only knew of the success of his attempt to be the first to introduce the manufacture of cotton in the south; but as his name has been frequently mentioned since, we have learned that, for a considerable time, he has been unremitting in his exertions to develope the riches of Ireland: about four years since, he undertook to rectify the abuses that existed in the butter trade from time immemorial;—his letters circulated throughout the land in the shape of pamphlets, pointed out to his countrymen the mode of getting rid of the old system, and that, by care and attention, they could not only rival the Dutch in the English markets, but produce a better article, and obtain a higher price, notwithstanding the most violent opposition on the part of the butter merchants of Cork. Mr. CROKER has the satisfaction of seeing all he anticipated realised; butter made after the directions he gave, brings more money now than the best foreign—it is sold under its own name, "mild Irish," when before, the very name of "Irish" was enough to condemn it, and when the price was not within from 15s. to 20s. of the Dutch. We also learn that his business now in London is to get the Irish Fisheries' Acts so amended, as to make the fisheries of Ireland a source of wealth to the country. Here is an example set by an Irish gentleman, which, if followed by other landed proprietors, would make Ireland the finest country in the world. Will they ever consider the injury they are doing, not only at home, but to the kingdom at large? The high party feelings, the apathy, of those whose duty it is to improve a spot so favoured, cannot be too highly reprobated; for if they will only forget their differences, which will be found to be more imaginary than real, and join together for the public good, they will see their properties improve—their poor employed—their people content—peace and happiness succeed violence and poverty—to accomplish which, we shall only say, follow the example of Ireland's friend—MR. DILLON CROKER—a man of whom we cannot speak too highly.

We direct attention to the report of the New British Iron Company, inserted in another column, a being of a highly satisfactory nature. A dividend of 20s. per share was declared out of the profits made during the half-year, ending 31st March last, being at the high rate of 20 per cent. per annum, on the paid-up capital.

GREENHOW'S GEOMETRICAL RAILWAY.*

In the *Mining Journal* of last Saturday, we gave a brief notice of this pamphlet, from which we shall now proceed to lay before our readers some of the arguments by which Mr. Greenhow supports the position he *has* taken. In proceeding to point out the dangers attending the present system of railway construction (beginning at the foundation—the rails), he says:—"The wheels, rails, and carriages, are only parts of one great machine, on the proper adjustment of which, one to the other, entirely depends the perfect action of the whole; and as the velocity given to the moving parts increases, so does the necessity for perfect adjustment increase also, because this imperfect action, which would only cause a *jolt*, will, when moving at high velocity, gain sufficient force to cause an overthrow. The relationship between the running surface of the rail, and the tire of the wheel, has been allowed to remain much in the same state it was made many years ago in the north of England. When moving only at a moderate speed, the coal was conveyed from the mines to the place of shipment. Take any piece of mechanism, simple or complicated, and disarrange its parts, so that they do not act in unison with each other, what will be the consequence?—the machine will cease to perform its functions, or the ill according parts destroy each other. When a body is moving at a high velocity, it then, to all intents and purposes, becomes a projectile, and subject to the laws attending projectiles, and, therefore, its tendency is to proceed in a directly straight line; and in an exact ratio to the increase of the distance passed over, in a given portion of time, does this tendency predominate. The rails being the directors of the course to be taken by the locomotive and vehicles attached to it, it becomes necessary that any deviation from the strait line should not be suffered to destroy the adjustment between the wheel and the running surface of the rail, because, should it do so, the moving body, in obedience to the impulse, will pass off the rails, and hence one of the greatest causes of accident."

Having enumerated some other sources of accidents, inherent in the present deficient system of railways, he proceeds to describe the remedy which he proposes—viz.: a cylindrical or convex running surface, and the tire of the wheel concaved, to adjust itself in every position to the surface of the rail on which it may rest—"a correct action will then be secured under all ordinary circumstances, because the concave tire fitting the rail in every position, and adjusting itself to suit all the altering circumstances, still offers an equal resistance on any contingency occurring to divert the impulse to move in a directly straight line."

The author next enters upon the inquiry, how the concave tire had best be adjusted to the convex rail, so as to insure its passing safely along, and secure its offering a sure resistance to any attempt of the moving body to run off? the advantages attendant on the spokes having an inclination from the circumference of the wheel of 22½°, and the mode proposed by him, of hanging the carriage to a strong frame, and thus acting as a pendulum—at the same time, in case of the raising or lowering of one rail, the pendulum is prevented from oscillating by proper stays fastened at each side to the framework. To obviate the loss of tractive power, which takes place from want of uniformity in the resistance to different carriages, the author then shows that there ought to be a definite scale by which to construct the carriages, having a proper relation to the base on which they rest, and a description of the mathematical theory follows, illustrated by a diagram, which will be found in the *Mining Journal* of 21st of last February. The pamphlet is further illustrated by copper-plate diagrams, which we have given at different times in our notices of the invention; and closes by remarking that, on the score of economy, the proposed system has many advantages: the cylindrical form will give great strength to the rails, and, not being liable to the heavy blows which occur during the resilient action on the present system, cast-iron might be safely employed in their construction, which would at once effect a saving of 1000*l.* per mile—while, from the uniformity of action between the wheel and the rail, and the small space on the surface in actual contact, the friction would at all times be equal, and reduced to the least possible amount—thus effecting great saving in wear and tear; while all lateral friction is avoided, and the destructive action of the extremity of the flange on the edge of the rail prevented, by the formation of the tire always keeping the wheels on the rails so placed as to revolve with the point of contact moving at equal speed. We have, in all our notices of this mode of construction, considered there was much merit in the circular rail and concave tire; and to all parties interested in the economic working of, and safe transit on, railways, we recommend a perusal of the arguments which Mr. Greenhow adduces in support of the entire system as patented by him.

* *An Exposition of the Danger and Deficiencies of the present mode of Railway Construction, with Suggestions for its Improvement.* By C. H. GREENHOW: Weale, 59, High Holborn

IRONMASTERS' QUARTERLY MEETING.

WOLVERHAMPTON, WEDNESDAY.—The quarterly meeting of the ironmasters was held here to-day, and was most numerously attended. After considerable discussion, it was resolved, that the final arrangements with reference to prices should be reserved for the meeting at Birmingham to-morrow It was admitted on all hands, that the market had been firmer during the last fortnight, and it was further averred that there was a probability of a considerable demand in the next three months. This was put forth as a reason why existing prices at least should be maintained.

BIRMINGHAM, THURSDAY.—The usual quarterly meeting of the ironmasters was held here to-day. It was attended by all the most extensive ironmasters in South Staffordshire and Shropshire, and by numerous other persons interested in the trade. At the commencement of the evening, it was evident that the purpose of the masters was to fix upon such a price as there was a probability of sustaining through the quarter, and in this view the manufacturers and factors generally seemed to concur. It was reported by the masters that the demand for iron had considerably increased during the last two or three weeks, and that consequently no reduction would be acceded to. The result of this announcement, at an early period of the day, produced a very different effect to that manifested last quarter-day, the price being at that time fixed without much appearance of firmness, although we alone then predicted, that the great masters would maintain the prices throughout the quarter—an assertion which has been borne out by the fact. The present prices may now be considered to be firmly fixed for a time. There is no probability of any reduction during the quarter, it having been determined to-day to maintain existing rates. These are—Bar iron, 10*l.* per ton; hoop-iron, 10*l.* 10s. per ton; and pig, 4*l.* 10s. to 4*l.* 15s. From this it will be seen that pigs are nearly 5s. better than they were two or three weeks ago. With reference to the iron required for the construction of railways, it is proper to state that the present demand is such as not to have materially affected the prices fixed to-day. 30,000 tons of rails, ordered in about equal quantities from the Chillington Works, from Messrs. Bagnall's, and Messrs. Forster's, comprise nearly the whole of the orders on hand for this purpose Upon the whole, the business may be said to have gone off in a more satisfactory manner than for a considerable period. The masters, one and all, report that trade in their districts, never appeared to be more healthy than at the present time.

PRESENT STATE OF THE IRON TRADE IN SOUTH STAFFORDSHIRE.

[From the Birmingham correspondent of the *Morning Herald.*]

I have collected some information respecting the iron trade of this district, which I herewith send. It is a list of the ironmasters, or nearly the whole, in the district of South Staffordshire, their works, number of furnaces in and out of blast, forges, and mills, and the quantity of iron now being weekly made. In the year 1841, the conductors of the *Mining Journal* procured, at considerable trouble, returns from this district, from which it appears, that there were then 135 furnaces, 86 of which were in blast, and the estimated make per week, 6676 tons. From returns which I have just obtained, I find the following is the state of the trade now in the same locality. Those marked thus (*a*), have forges and mills.—Those marked thus (*b*), forge and mills:—

Names of Proprietors.	*Names of Works.*	*Furnaces.*	*In & out.*
a Chillington Co.	Chillington	4	4
a G. B. Thorneycroft and Co.	Shrubbery	—	—
a Ditto	Bradley	—	—
a Henderson	Wolverhampton	—	—
T. M. Gladstone	Ditto	—	—
W. H. Sparrow	Stow Heath	5	3
a Ditto	Osler Beds	2	2
Ditto	Bilston	—	—
Parkfield Co.	Parkfield	4	3
Dixon and Co.	Wolverhampton	3	3
William Ward	Priestfields	3	3
a William Riley	Mill-fields	3	3
George Jones	Bilston	3	3
a Ditto	Coseley	2	2
Ditto	Spring Vale	—	—
John Bagnall and Sons	Cappenfield	3	3
a Ditto	Gold's Green	3	3
a Ditto	Ditto	—	—
a Ditto	Goldshill	—	—
a Ditto	Toll End	—	—
a Ditto	Imperial	—	—
a John Bradley	Capponfield	—	—
b Ditto	Bradley	—	—
T. W. Vernon	Stonefield	1	1
a T. Banks and Sons	Barbersfield	2	2
a Ditto	Ettingshall	—	—
Firmstone	Highfields	—	—
a Wilkinson's Trustees	Hallfields	1	1
a Wm. Baldwin and Co.	Bevereux	2	1
Ditto	Bankfield	—	—
	Bilston Brook	2	*out*
b David Jones	Bilston Bridge	—	—
Benton and Pemberton	Deepfields	3	1
H. B. Whitehouse	Prior-fields	3	3
b P. Williams and Sons	Wednesbury Oak	3	3
a Walker, C. and T.	Gospel Oak	—	—
a Ditto	Tipton Old Church	—	—
a Millington	Summer Hill	—	—
Late Dixon and Co.	Tipton Furnaces	2	*out*
Bramah and Co.	Horseley	2	*out*
Colborne and Co.	Broadwaters	2	2
Sir H. St Paul	Willingsworth	3	*out*
Scott and Forley	Moorcrofts	2	*out*
Lloyds, Fosters, and Co.	Wednesbury Old Park	2	2
a Cresswell and Sons	Tipton	2	2
a Bramah, Barrows, and Hall	Bloomfield	—	—
b Rd. Bradley and Son	Factory Works	—	—
b Bramah and Co.	Tipton Green	—	—
Morris and Sons	Park-lane	1	1
Lord Ward	Coneygree	3	2
Hartland	Eagle Furnaces	2	2
a Ditto	Greets Green	—	—
Hopkins and Co.	Dudley Port	2	2
b Plant and Fisher	Ditto	—	—
b Batson	Ditto	—	—
b Ditto	Greatbridge	—	—
P. Williams and Co.	Union	3	3
b Hunt and Sons	Brades	—	—
J. Dawes and Sons	Oldbury	2	2
b Ditto	Bromford	—	—
b Walter Williams	Albion Works	—	—
b E. Page and Sons	Roway	—	—
b Malins and Rawlinson	Phœnix	—	—
b Ditto	Leebrook	—	—
b Grudgington and Co.	Ditto	—	—
b Patent Axle and Co.	Brunswick	—	—
b T. Davis and Son	New Golds Hill	—	—
b John Marshall	Monwayfield	—	—
b Joseph Maybury	Victoria	—	—
b Thos. Davis and Son	Crookhay	3	3
b Bills and Mills	Darlaston-green	1	1
b Underhill, Whitehouse, and Co.	Ridgacre	—	—
Addenbrook and Co.	Darlaston	2	2
Fowler	Ridacre	1	*out*
b Beasley and Farmer	District Works	—	—
b George Downing	Crown Forge	—	—
b John Williams and Co.	Smethwick	—	—
b Silvester and Jackson	Spor Lane	—	—
b Gregory	Ditto	—	—
b Tividale and Co.	Tividale	—	—
	Cotain	2	*out*
Trustees of the Countess of Lichfield	Bentley	4	*out*
Philip Williams	Birchill's	1	*out*
b Pelsall Iron and Co.	Pelsall	2	2
a Oak Farm Co.	Oak Farm	2	2
b John Bradey and Co.	Shutt End	4	4
Mathews and Dudley	Corbyn's Hall	4	4
P. Gibbons	Corbyn's Hall (new)	3	3
Blackwell Jones, and Oaks	Ketley's	2	2
b Wheeleys P.	Bromley Forge	—	—
b John Bradley and Co.	Brockmoor Works	—	—
b South and Co.	New Ley's Works	—	—
b Hunt and Browne	Brockmoor	—	—
W. and G. Firmstone	The Leys Furnaces	3	3
b John Bradley and Co.	Breerly Works	—	—
Wheeleys	Brettle Lane	2	1
b British Iron Company	Nine Locks Works	—	—
b B. Gibbons	The Level Works	—	—
Wm. Irzon	Old Level Furnaces	2	1
Lord Ward	New Level Furnaces	3	*ou*
Braham Cochrane	Woodside	2	2
b Ed. Hill	Ditto	—	—
b S. Evers and Co.	Cradley Works	—	—
b British Iron Company	Coneygree	3	2
b John Bradley and Co.	Stourbridge Works	—	—
b Lee and Bolton	The Hyde	—	—
b Williams and Warden	Whittington	—	—
b Knight and Co.	Coukley	—	—
b Morgan and Co.	Broadwater	—	—
b Lewly and Co.	Wilden	—	—
b Barnett	Falling Sands	—	—
Evers and Martin	Parkhead	2	1
Blackwell and Co.	Russell's Hall	2	2
M. and W. Grazebrook	Blower's Green	2	2
Molineux	Buffory	3	*out*
b Haden	Ditto	1	1
Partridge	Windmill End	2	1
Best and Barrs	Withymore	2	2
British Iron Company	Netherton	2	2
Ditto	Dudley Wood	4	2
	Totals	146	107

On average each furnace produces full 90 tons per week; making the weekly produce of this district 9630 tons; each furnace consuming in the produce of the above quantity of iron, seven tons of material for every ton of iron, or 630 tons of mineral matter.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

I regret to have to announce the death of M. Hallette, the inventor of the atmospheric system of railway, which has lately attracted so much attention in England, and been so often dwelt upon in the columns of the *Mining Journal.* Previous to his departure to England, M. Hallette was in such ill health, that his friends advised him to postpone his journey,—but the great interest he took in demonstrating the excellence of his invention made him disregard their remonstrances. On his return from London, he fell ill immediately on touching the French soil. He was removed to Hesdin, the residence of a nephew, and there remained in a state of perfect insensibility until he died. It is painful to see a man of such energy and talent cut off at the very moment he was about to receive the reward of a valuable invention, and of years of exertion. M. Hallette had long been at the head of an extensive machine manufactory at ARRAS, and was one of the most eminent persons engaged in that branch of industry in this country.

The shareholders of the sulphur mines of Algiers are convoked for the 27th. It appears that there has been paid up sufficient calls on the shares to warrant the directors in forthwith commencing the working of the mines.

Notwithstanding the expected reduction of the duties on iron, in favour of shipowners, has not taken place, the building of vessels in iron is steadily on the increase in this country. The Government has several iron steamers in course of construction; and the shipowners of Bordeaux, Nantes, Havre, and other places, are giving orders for iron vessels. Even at Paris iron steamers have been constructed for mercantile houses in Germany.

The Marquis of Londonderry is repeating in the Parisian Journals his advertisements of good coal to sell very cheap. With all the tact of a practised advertiser, the noble Marquis assures the Parisian public, that his coal is not only indispensable for breweries and manufacturing establishments, but is an excellent substitute for wood in private houses. Unfortunately, the private houses in Paris have no grates, wood being invariably used. If, then, the Parisians begin to use the Marquis's coal, will the Marquis supply them with grates?

The Austrian Government has lately published returns respecting its commerce, in the year 1844. It appears from them, that in 15 years the total increase had been 62½ per cent. In 1844, there was produced in the Austrian empire iron of the value of 144,000,000 fr.; cast and forged iron, 77,600,000 francs; other metals, 72,000,000 frs.; coal, 531,000 tons; steel, 115,500 metrical quintals.

The duty on iron in bars imported into France is 206 francs 20 cents. per ton; on cast iron, 77 francs a ton, if brought by sea. These duties make the French consumer pay, on an average, 174 francs per cent. on bar iron, and 160 per cent. on cast iron, more than he need pay, if allowed to receive supplies freely from England. Without counting the railways not yet completed, but which have received or contracted for their supplies of rails and chairs, the Chambers have authorised during the session just closed not less than 4500 kilometres of new railway. This immense length will have to be completed in four years, and will require, at a moderate calculation, 700,000 tons of rails; the chairs (*coussinets*) will need 150,000 tons of cast iron; and counting the unforeseen demand arising from doublings of way, &c., a million tons will have to be supplied in the four years, or 250,000 tons per annum. The ironmasters themselves do not profess to be capable of producing more than 126,000 tons per annum;—but no one believes them capable of producing anything like so much. What, then, are the railway companies to do? In the face of such a tremendous deficit one is astonished at the gross supineness of the Government, in leaving the present exorbitant (and, as they have been fitly called, "barbarous") duties untouched. People say that the Government has been duped by the representation of the ironmasters, that the railways authorised cannot possibly be finished in four years; but, if so, how comes it that the Minister of Public Works imposes upon the companies the necessity of having their lines finished within that period? Besides, whether finished or not, the demand for iron will always be far greater than the ironmasters can possibly supply,—and it will increase annually with far greater rapidity than their means of meeting it. The price of rails is already enormous. Months ago a contract was taken for rails at 380 francs a ton; and from one railway company, 16*l.* per ton was actually demanded. For the present, it is true, prices are not quite so high; but will they not be higher at the end of this year, or the beginning of the next? What, then, I repeat, are the railway companies to do?

Transactions in coal, iron, and mining companies, continue to be very frequent, especially in those of established reputation, such as the Charbonnages, Belges, the Forges Decazeville, La Vieille Montagne, &c.: of late, however, I have not heard of any new company of importance having been launched.

There appears reason to believe, that the Government will, on second thought, authorise the free trade association, proposed to be got up here, in imitation of the Anti Corn Law League. If so, stout attacks will be made on all monopolies, and all restrictions whatever on commerce. The monopolist party is very powerful in this country, and will take a great deal of trouble to crush; but after what we have seen in England, we must not despair of France.

The heat has been so intense as to have affected parts of several of the iron bridges on the different railways.

A newspaper tells a marvellous tale of vast quantities of gold dust having been found in a river in the Isthmus of Panama, by an engineer sent by the French Government on an engineering expedition. It adds, that several Parisian capitalists have subscribed considerable sums of money to send out workmen to the spot, and they calculate on getting the moderate return of 1,000,000 per cent. I wish they may get it!

An agriculturist has just discovered, that milk pans made of iron are far better than those made of wood or pottery. They keep the milk much cooler, and produce greater quantities of cream, which yield better butter than can be obtained from milk kept in other pans. Hitherto, I believe, milk pans have not been made of iron; but farmers, no doubt, will now universally employ them.—*Paris, Tuesday.*

LAMHEROOE WHEAL MARIA MINE.

COURT OF QUEEN'S BENCH—GUILDHALL, JULY 9.
(BEFORE LORD DENMAN.)

THOMAS *v.* SMITH.—Mr. SHEEHAN opened the pleadings as follows:—In this case, Mr. Frederick Samson Thomas is the plaintiff, and Mr. Henry Smith is the defendant. It is an action for a libel, which is set forth in the declaration. The defendant has pleaded not guilty, and several other pleas, upon which issue is joined.

Mr. DOWDESWELL.—Gentlemen, this, as you have heard from my friend, Mr. Sheehan, is an action for a libel published by the defendant, respecting the plaintiff. That libel is of a very serious nature; but, I believe, my friend Mr. Clark, appears before you on the part of the defendant; and is ready to make an apology for the wrong which has been done to the plaintiff, and if that apology be satisfactory to me, I shall have great pleasure in relieving you from the public consideration of the case.

Mr. CHARLES CLARK.—Gentlemen, the defendant in this case, I believe, is a very respectable person; and, therefore, he desires to retrieve the error into which he has fallen. The libel, of which complaint has been made, he published on hearsay evidence; he is now convinced that the facts stated in the libel are not correct: he regrets, exceedingly, that he acted on such evidence, and that he published such a libel, and he now publicly withdraws it. He trusts that this statement will be satisfactory to the plaintiff.

Mr. DOWDESWELL.—Gentlemen, on the part of my client, I have great pleasure in accepting the apology which my friend has made. This action was brought by Mr. Thomas, publicly to refute a charge which was made in the *Mining Journal* respecting him, which was of such a nature, as rendered it totally impossible my client could rest under it, if he had the slightest respect for himself, or regard for the esteem of his fellowmen. Under these circumstances this action was brought, to challenge the defendant to the public proof of the charge he made; and I am very glad, that my friend has withdrawn it, so that it will not be necessary for you to go into the investigation. The action having been brought solely and simply for the purpose of vindicating Mr. Thomas's character, and doing away with the imputations which were made upon him, my duty is confined to informing you, that Mr. Thomas never thought of seeking money, in the shape of vindictive damages, at the hands of the defendant, and is content that you should return your verdict for the lowest amount of damages, which will subject the defendant to the payment of these expenses, which his conduct has occasioned.

Lord DENMAN.—Then there will be a verdict for nominal damages.

Mr. DOWDESWELL.—Yes.

A verdict was then taken for the plaintiff, for nominal damages, with costs.

Original Correspondence.

ATMOSPHERIC RAILWAYS.—THE BAROMETRICAL SYSTEM.

[*It is a fact, that for working railways by the present means an immense power is employed.*]

Sir,—The question of working railways must not be considered as a mere mechanical question, in which the expense of power is of little import, if the object proposed is obtained. The least saving in the working of railways is of immense value; and as it is a great and true feeling, that the present means of working are very far from the possible cheapness, new schemes will be proposed, new projects tried, employed, put aside for better ones; and it is impossible to foresee what time, how many partial improvements, will be wanted—how many various agents will be tried, used, left for others—until we arrive at the point of entire perfection, from which, every one knows, we are separated by a great distance.

The only way of preventing these long, costly, often fruitless, trials—of preventing the introduction of schemes worse than the means actually employed—is to establish some fixed and general principles, by which all the systems of locomotion can be judged, not in their relative, but in their absolute value.

These principles, we find in the science which embraces all the interests of nations, to which railways belong, as a large part of the social wealth, in the *general economy*. The laws of general economy are the result of the experience of ages; they are the laws of Nature applied to the works of man—the only seal of what amongst them is not subject to change and improvement. From these laws the appreciation of any system will be naturally drawn. Engineers are neither inventors nor poets—they are economists; they can, as private men, employ their skill, their experience, for finding new means, very often wanted; but their special object is to judge, and to apply those means; and, in any case, their grand, their only *criterion*, must be ECONOMY. Such is the connection between the consequences of a perfect construction, that economy of expense is also economy of time—economy of disorders; that a truly economical system of locomotion will be altogether safe and rapid. Economy, in the full acceptation of the word, is the absence of any circumstance preventing the effect of a cause.

Every apparatus, proposed or employed in railway locomotion, is subject in its construction to certain natural laws, according to the nature of the power, to that of the resistance. It is the *transition* from one to the other; and the object to attain in it, is to avoid any loss in this *transition*: this is a necessary condition for a definitive apparatus; and the way of appreciating how far this result is obtained, is to compare the power with the resistance.

But without going into all the particulars of every system, it is evident that should the power be represented by a corresponding resistance, overcame, the apparatus could not be economical, if the power is not economically produced.

A definitive system of working will be, therefore, that in which the power will be produced in the most economical manner, and applied in the whole of its value.

We know, as principles of general economy, that *work is produced with the least expense, when it is produced in a constant and regular manner; that saving is increased by increasing the amount of work performed altogether, in the same operation, under a single direction.* A *definitive system* of working must, therefore, present a production of power constant and regular, a single direction, apparatus as large as possible, because these are the characteristics of real economy; and, without looking into the particulars of a system, we can affirm that it is not the *definitive system*, if it does not present them.

Railways in their construction are based upon these principles—the regularity of resistance lessens the expenses of traction; the unity of line, the large amounts of work performed at once, are true economical characteristics, which protect the construction of railways against any notable improvement—the great results of railways are owing to these causes. They are imperfect still—because, as we said, the only actual saving in railways is a saving of time; and the full advantages of railways can only be developed by a *definitive system* of working.

Is any of the systems, actually proposed or employed, a *definitive system?* We have given on the losses of locomotive engines an estimate, that we shall support in some following articles by irrefragable evidences; but, should the locomotive engine not loose any power, in consequence of its own nature, its working at intervals, its small proportions, the division under several directions of the work, performed on the same line, prevent its being ever a system attended with economy—the *definitive system.*

The general characters of rope system, atmospheric railway worked by any of the means actually employed, prove clearly that none of them can be the *definitive system.*

Let, then, all these lines, so anxiously claimed by every part of the world—let them be laid down—be worked by any of these systems—let enormous sums of capital be spent in establishing costly machines: no man can doubt, and we say, before long all these apparatus will be removed, cast aside—not because men of greater genius will introduce new ideas; but because, these means being defective, better ones will be the result of experience: such is the course of any thing which is, which has been—so it must be. The society is now wanting of a *definitive system*—she is labouring under this necessity—these thousand unformed, unexplained projects, are as many symptoms of it.

The conditions, required by the principles of general economy—the continuous and regular working—the large apparatus—the unity of direction—cannot exist in any but a stationary engine.

Atmospheric propulsion is the only system with stationary engine, which seems to present any chance of leading to a definitive apparatus. We shall examine every plausible scheme proposed, so as to arrive at its real, special, and general value.

We distinguish, amongst the means of working, AIR PUMPS, VACUUM RESERVOIRS, and WATER TANKS.

Air pumps are the only means yet practically employed—the only reason to justify their employ is the historical reason, that they have been employed for a long time in laboratories. It was thought that, as small pumps could empty small spaces, large pumps would empty large receivers; the consequence was right, mechanically speaking—it was not economically; and, such was the absence of economical considerations, that in the first apparatus, and even at Dalkey, air pumps did not present the advantages of the construction of those used in laboratories. A single cylinder was used, acting only on one side—one stroke was, therefore, lost; and thus, for this only reason, half the power.

Great allowance must be made in such a case as this; high credit is deserved by those men, who had the courage of carrying out the atmospheric railway, with its first practical means—society is indebted to them, for making a fact of what was a mere theory—and experience has taught them the value of ECONOMY.

The working of atmospheric railway presents, as every system, some peculiarities belonging to its nature, to that of the agents employed.

To work advantageously atmospheric railway, requires, as we have proved it [Table ii], a variable force to produce *exhaustion*, a regular one for *traction*, apparatus must be large; because the general laws of economy require it; but here this large size is wanted again, by the necessity of collecting the rarefied air—of using it as a power.

And air pumps have been used, worked by a regular power, small in size, offering entire impossibility of making in any circumstance the working apparatus work according to its object!

Air pumps are impossible, economically speaking; they are impossible, mechanically speaking; their losses by friction, leakage, improper application, are enormous; and still engines, constructed to overcome a resistance greater than the real one at any time, will not bear this resistance—because their action is not regular, because there are differences of resistance, not alone in every part of the operation, but even of the stroke, that the engine, getting high speed when the resistance is low, meets with a shock, when suddenly it increases, is moved, shaken, broken.

A great distance separates the first trial of a system from its entire perfection; long time is spent, if practical experience alone directs improvements; under such a guide the human mind oscillates, like a pendulum, from one point to another; every oscillation is an improvement, but many are the oscillations before it stops at this point, at this centre of gravity, shown at once by the laws of economy. N. A. BURNIER.

Dufour's-place, July 9.

[*Errata.*—I find in my letter, inserted in your last Number, two errata, that I shall be obliged to you for noticing in your next; the word *valve* has been twice printed instead of *value*.—N. A. B.]

RAILWAYS AND THE MONEY MARKET.
THE IRON TRADE—PROBABLE SUPPLY AND CONSUMPTION.

Sir,—When I addressed you, at the close of the last session of Parliament, under the above title, I ventured to predict, that "the impetus for railway making having been given, nothing would check it until every town in the kingdom is accessible by railway." I presumed that "not less than 2000 miles of railway would be sanctioned by Parliament in the present session, and (at least) 1000 miles in the session of 1847." I calculated that, in the three years (1846, 1847, and 1848), an extra demand for between 2,000,000 and 3,000,000 tons of iron would be created by railway enterprise; that such a deficiency of labour, of materials, and of manufacturing capability, would be experienced, as to make it impossible to meet that demand; and that "the difficulty of obtaining iron at any price would shortly present a novel feature in the commercial history of this country."

The course of events has more than confirmed those expectations; and has interfered with those calculations, only to make the result more remarkable, and more certain.

The impetus for railway making has surpassed all precedent. Old and young, male and female, peer and peasant, clergy and laity, merchant and clerk, shopkeeper and journeyman, all became enamoured of the new investment. Political economists, legislators, and daily journalists, were alarmed—"leading articles," "City articles," "bankers' circulars," speeches in the Lower House, and speeches in the Upper House, grave dissertations in bulky periodicals, and humourous illustrations in ephemeral productions, all conspired to impede the rapid movement. Sessional orders of a novel description were passed with extraordinary haste, in order to extricate the multitude of scripholders from the meshes of the net in which they were considered to have entangled themselves. And what has been the effect of all these attempts to suppress the railway "*mania*," and to relieve the "*deluded*" speculator? A few injudicious schemes have been abandoned—a few deposits have been returned; but by far the greater number of the railway projects are progressing, and will progress, in spite of the loud outcry, the grave warnings, and the fearful apprehensions. Instead of 2000 miles of railway being sanctioned this session, there is every probability of 4000 miles receiving the Royal assent; and instead of 3,000,000 tons of iron being required for railway purposes, between 4,000,000 and 5,000,000 tons will be wanted.

We stop to inquire—How will this singular movement affect the commercial interests of the country? Will it derange the whole of our monetary system, as has been hastily asserted, and a thousand times repeated? Will it absorb all the spare capital of the country, or create confusion by leaving all ordinary undertakings too scantily supplied? No such thing will happen: railway interprise differs from every other, and the distinction has been wonderfully overlooked.

A railway is a stupendous piece of machinery, which, unlike all other machinery, cheapens cost, without either increasing production or diminishing human labour.

Railways call for a large amount of capital; but by expediting the transit of goods, they so reduce the stock of every tradesman, that they create a disposable capital, in many cases equal to that required for their construction.

The mode of raising railway capital, and the manner of expending it, serve also to neutralise the inconvenience which often attends the substraction of a large amount of money from the ordinary channels. Being divided into small shares, and payable by small instalments, a great portion of such capital is made up of inconsiderable sums, which would otherwise have been unappropriated and unproductive. Nor is railway capital long idle—it quickly returns into the hands of engineers, lawyers, landowners, ironmasters, timber-merchants, contractors, and workmen—all of whom become possessed of extraordinary funds, a considerable portion of which reverts, either directly or indirectly, into similar investments.

Instead of requiring an increase of the circulating medium, which is the natural consequence of investments in trade or manufactures, railways convey the gold and silver to the provinces, and back to the metropolis, with such rapidity, that every new line lessens the required amount of the circulation, and accumulates the bullion in the coffers of the Bank of England. They create also a new and a large paper currency in the shape of scrip and share certificates—the value of which is ever fluctuating, but, taken as a whole, is fully equivalent to the nominal amount.

Taking into consideration all these circumstances, the position may be fairly maintained, that there cannot be too large an outlay in railways, provided the expenditure is regulated by economy, and such lines only are sanctioned as will, at moderate fares, yield a proper return for the capital employed, and not materially reduce the returns of previously existing lines. These desiderata will, no doubt, be sometimes wanting; yet it does not follow, that an ill-paying line to the shareholders is a losing line to the public. There may not be sufficient traffic to remunerate the proprietors, yet the saving to passengers and traders may be greater than the dividends on the best paying lines. It is, therefore, the interest of the public, that as little delay as possible should occur in completing the projected railways. There is no fear of their progressing too rapidly; but there is reason to apprehend, that they *cannot* be executed with speed equal to the public requirements.

The great check which will be given to railway making, both at home and abroad, is the necessary restriction to one material, and the impossibility of supplying the demand, which railways must create for that material. It has been asserted over and over again, that such a vast number of miles of railway ought to be distributed over a period of seven or ten years. That such a distribution *ought* to be made, is very questionable; but that such a distribution *must* be made, is absolutely certain. The *money* may be found—the *iron* cannot be supplied.

At the close of the present session, the railway companies incorporated by Act of Parliament will have virtually bespoken a quantity of iron equal to the total make of England, Wales, and Scotland, for the next four years—leaving none for ordinary uses at home, the requirements for which are steadily increasing, and will be further stimulated by the liberal commercial policy recently adopted by our Government, and leaving none for the supply of foreign countries, whose wants already exceed their own capabilities, and which will, ere long, follow the example of Great Britain, and abolish those restrictions which have hitherto prevented them from purchasing in the best and cheapest market.

Where, then, is the iron to come from? Our make of iron is not, at present, on the increase. A few new furnaces have been built—a few more are in progress; but most of the old works have reached their maximum, and several are on the decline. Whatever ingenious theorists may surmise, respecting the *formation* of iron ore, and the *growth* of coal, the practical ironmaster is every day reminded of the *disappearance* of those minerals. He knows, too, that as wages advance, his *stock* of minerals is apt to diminish; and that the quantity of iron manufactured does not depend so much upon the demand, as upon the readiness or reluctance of the miners to keep to their work, which is so laborious, that they would rather do less and earn the same wages, than do the same work, and earn more. These circumstances will, for a long time, operate to prevent any addition to the quantity of iron now manufactured; meanwhile, the excess of the demand beyond the supply must create exorbitant prices, and many a railway will present the strange anomaly of being incomplete, because it cannot be provided with the article which gives it both its name and its utility.

It may be asked, why has the price of iron receded, rather than advanced, during the last year? Because of the uncertainty and the gloom which have hung over our commerce, our Goverment, and our foreign relations. These clouds have all passed over; and, with a free trade, a strong administration, and peace with all the world, nothing can prevent the natural tendency of any article to continue to rise in price, so long as the manufacturer is unable to meet the wants of the consumer.—A LOOKER ON: *July* 7.

MANUFACTURE OF IRON.

Sir,—In reply to the queries of "An Ironmaster," contained in your last Number—the best constructed furnaces in South Wales, are those at the Abersychan Iron-Works; in Staffordshire, those built by Mr. Gibbon, at Corbyn's Hall, claims pre-eminence; and in Scotland, the furnaces at Dundyvan may be considered the most complete.

Mr. Gibbon's furnaces are of the best construction at present adopted; but even these are far from having attained the limit to which an improvement in construction might be carried. By a different mode of construction, the furnaces at present in blast in the United Kingdom would readily afford an increased yield and superior quality of iron, amounting to 50 per cent. upon the quantity at present manufactured.

The greatest yield of pig-iron, when the size of the furnace is taken into consideration, has been obtained at the Parkend furnace, where 140 tons of forge pigs have, I believe, been produced from a furnace containing 3400 cubic feet of materials in a single week. This great result is, however, solely to be attributed to the surpassing richness and fusibility of the iron ore, peculiar to the Forest of Dean, in which this furnace is situated. The best constructed forge and mill is the new one at Cyfarthfa, belonging to Messrs. Crawshay. The best form of constructing hot blast pipes is, I believe, my own—viz.: a spiral tube of cast-iron; each thread of revolution of which is composed of two very flat elliptical segments of piping, 15 to 20 inches inside measure in width, by 3 to 4 inches in depth. The spiral tube thus formed, by jointing together these segments, to consist of as many revolutions as may be deemed sufficient; the more in number, of course, the greater will be the heating surface, and the less will be the amount of fuel required to heat the air. The complete tube to be enclosed by a cylinder of brick work, heated like a common flue; the cold air to enter at the upper and cooler extremity of the tube, and, after descending along the heated spiral, to make its exit at the lower extremity, where the heat will be at a maximum. Hot-blast pipes thus constructed, and protected by brick work, will last for an indefinite length of time; they will, likewise, admit of a maximum amount of heating surface, and facility of heating the air—whilst a minimum amount of fuel will be required to heat that air. Less friction will, likewise, be found to take place with such pipes than occurs in pipes constructed by the ordinary methods; whilst a temperature of 1000° may be given to the air, with less danger to the safety and endurance of the pipes, than is at present incurred by them in obtaining a temperature of 500° to 600°.

There is, however, no necessity for employing so expensive a material as cast-iron in the construction of hot-blast stoves; and I have long contemplated the adoption of a species of cement, which I have tested, to form an imperishable tubing, capable of withstanding a heat which would speedily melt cast-iron pipes.—R. MUSHET: *Coleford, July* 8.

THE MANUFACTURE OF IRON WITH PEAT FUEL IN IRELAND.

Sir,—In reply to Mr. D. Croker's questions respecting iron making with peat fuel, I have for some years paid much attention to that subject; and, had I been a capitalist, the manufacture of peat iron would, ere now, have formed an important branch of industry in certain districts of England, Scotland, and Wales, where great natural advantages exist, as also appears to be the case in Ireland.

The expense of erecting a couple of small furnaces, with engine, boilers, &c., complete, sufficient to afford a weekly yield of from 80 to 100 tons of peat pig-iron, would amount to about 5000*l.*, where steam was the moving power; and 4500*l.* would suffice, should there exist upon the spot an available water-power equal to 30-horse power. Of course, if there are *great* difficulties attending the transport of machinery, building materials, &c., this estimate would be insufficient. The peat, if of firm quality, would not require compression, but should be perfectly dried by stoves, heated from the furnace head; the inferior peats would be well suited for firing the boilers and hot-blast stoves. Should the iron ore prove to be of the alluvial kind I imagine, the yield of iron will be considerable; and the quantity of dried peat requisite to produce 1 ton of iron, will not exceed 36 cwts. The limestone would require to be crushed, or at least broken, very small. The use of charred peat is wholly unadvisable, unless the peat be of that excessive density, which I have hitherto only observed in the Dutch and Danish peats; and even then I consider the charring as less advantageous than the stove drying of the fuel.

The excellence of the Russian and Swedish irons is mainly attributable to the mode in which they are manufactured; and there exists, moreover, a peculiarity in the composition of the ores from which they are extracted, that gives to the iron an excellence which no skill in manipulation can possibly confer. Peat iron would, however, at all times equal (if not excell) in quality the Lorn and Ulverstone charcoal bars, which (I believe) realise a high price in the Sheffield market.

If Mr. Croker will kindly favour me with samples of the peat, limestone, and iron ores, of his estate, I shall be better able to judge of their nature,—and shall be at all times most happy to afford him any information I possess upon this subject.—ROBT. MUSHET: *Coleford, July* 8.

THE MANUFACTURE OF IRON WITH PEAT FUEL IN IRELAND.

Sir,—When I addressed you this day week, on the subject of manufacturing iron from turf charcoal, in order to obtain information, in consequence of the Kenmare Mining Company having decided to smelt the rich iron ores found in such abundance on the Ardtully estate they hold from me, I find that, if I had had by me at the time Sir Robert Kane's most valuable work, *The Industrial Resources of Ireland*, I need not have trespassed on your columns, as nearly all the queries put by me are to be found answered from p. 158 to the end of that chapter, by a reference to which it will be seen, that at the ironworks of Ichoux, department of the Landes in France, no fuel is used in puddling but turf. In the high furnaces of M. Muller, at Wendenhammer, wood charcoal has been replaced by that of turf with complete success, and the quantity of ore worked off was materially increased. Again, in the high furnaces of Wachter, at Neunhammer, when half of the charcoal of wood was replaced by turf coke, the charge of ore was raised from 386 lbs. to 464 lbs.—the quality of the iron produced was excellent. MM. Moser and Wagner, who have examined minutely into the various conditions of this branch of industry, conclude that, both for smelting and refining iron, the coke of turf is as good and useful as an equal weight of wood charcoal. Sir Robert Kane proceeds to say—"It is unnecessary to multiply quotations of evidence of this kind. The great fact which is to be recollected is, that turf and turf coke answer perfectly for making and refining iron; and from the quantities of materials and products, which the experience of the French and German workers has found to answer, and the cost of those materials, as we know they can be had with us, we may proceed to calculate what are the financial conditions of the subject."

To produce a ton of pig-iron, at Ransko, there are required 35 cwts. of turf, and 30 cwts. of wood charcoal; now, for the latter, may be substituted the turf coke, provided it be compressed; and, as the turf may be taken at 4*s.* per ton, and the coke at 20*s.*—taking the ore and labour to be the same, as in our final estimate regarding the manufacture at Lough Allen, with coal, it becomes—2½ tons of ore, at 5*s.*, 12*s.* 6*d.*; 15 cwts. limestone, at 2*s.* 6*d.*, 1*s.* 9*d.*; 35 cwts. of turf, at 4*s.*, 7*s.*; 30 cwts. of turf coke, at 20*s.*, 1*l.* 10*s.*; labour and general expenses, 1*l.* 2*s.* 6*d.*—total cost of a ton of pig, 3*l.* 13*s.* 9*d.* Such iron, should, however, not be sold as mere pig, or used in castings. Its fine quality would peculiarly fit it for being made into bars: now, the Königsbrunn results enable us to see what these bars should cost in Ireland. The calculation is—27½ cwts. of pig, made as above, and costing 3*l.* 6*s.* 3*d.* per ton, 4*l.* 11*s.* 1*d.*; turf, at 4*s.* per ton (37 cwts. for puddling, and 30 cwts. for reheating), 13*s.* 5*d.*; labour and general expenses for which (in order to avoid an error in deficiency, I will take double the German cost), 1*l.* 1*s.* 8*d.*—6*l.* 6*s.* 2*d.* Hence the ton of charcoal iron in bars would be made for 6*l.* 6*s.*: now, the price of foreign charcoal iron ranges from 15*l.* to 35*l.* per ton. It cannot be made in England, for the wood charcoal is 4*l.* per ton in the Forest of Dean, where some little remnant of the manufacture lingers. They have no extensive peat deposits; if they boast of there greater extent of underground repositaries of fuel, we may point to ours, which lie upon the surface. We must learn, however, to employ them properly, and with economy, or else we should show ourselves utterly unworthy of the riches with which Providence has blessed our country.

The above are a few extracts from the most valuable work (as regards Ireland) that ever issued from the press, and which, I am convinced, will produce more real benefit to my native country than all the Acts of Parliament ever passed, or exertions made by the greatest statesmen, to improve its condition. Here Sir Robert Kane clearly shows, that a ton of iron can be produced for 6*l.* 6*s.*, equal to foreign, which varies from 15*l.* to 35*l.* Mining at all times must be considered a speculation; but in the manufacture of iron there is not room for even a shadow of a doubt, of a larger or more certain return on the capital embarked in it, than any other undertaking I know of. Ireland pays annually one million sterling to England for iron, when she possesses the means of producing an article double the value she receives; and in the make of which she cannot be interfered with, either by the blasts of England, for the want of charcoal or turf, or the Baltic, to where she is now obliged to resort for a supply, that we can produce equally good, and at a cheaper rate. As an example will very speedily be set by the Kenmare Mining Company, on my property in Kerry, I trust to see it followed throughout all Ireland, and that the vast and hidden treasures we possess, will from henceforth be brought to light, and

ply repaying all engaged in so desirable an object, and bringing peace, prosperity, and plenty, to a country, whose greatest misfortune and evil have been the want of employment. J. DILLON CROKER.

Duke-street, Adelphi, July 10.

THE DAVY LAMP—IS IT SAFE, OR UNSAFE?

SIR,—Did Sir H. Davy invent the lamp which bears his name? Is it, or is it not, entitled to the character of a safe lamp? The first question sinks into insignificance, in comparison with the importance of the second. Thirty years have elapsed since the discovery was announced to the world, and the author has passed that bourne from whence no traveller returns. The evidence in favour of Sir Humphrey's claim is clear and irrefragable.

The second—Is it entitled to the character of a safe lamp? has, from time to time, been the subject of discussion, and not always temperately or judiciously conducted. The importance of the question demands our consideration. It would be impolitic to say, that the Davy lamp is safe in the sense in which too many understand the words; but, with due limitations, I do not hesitate to say, it is. In order to understand the question, we must first ascertain the meaning of the word "safe;" and then inquire, how far the lamp fulfills the meaning the word implies. Walker defines it to be "conferring safety," and in this sense I understand it—viz.: a lamp conferring safety. In all situations where the lamp is used, there is more or less danger; and, consequently, care, attention, and judgment, are essentially requisite under such circumstances.

The lamp does not possess the power of annihilating the gases with which it may come in contact. We may be told, that explosions have been the result of too great reliance upon its merits—that more lives have been lost by fire-damp, since its introduction, than in any equal number of years antecedent to it; and even, in defiance of the laws of flame, that the damp has fired at the lamp itself. These—or in fact any, every, and all objections, which can be advanced—are answered in the previous part of this letter—the objections themselves, implying a want of care, attention, or judgment; but as my object in making this communication is to turn the attention of your talented correspondents to a consideration of the question;—and as many of them may, perhaps, differ with me, and may consider such a dismissal dogmatical and inconsistent—I will test each of them in detail. To the first: A lamp, conferring safety, does not necessarily imply, and we have no right to infer that it does, in all circumstances, or in any situation, *absolute safety.*—To the second: We may inquire, what were the numbers employed in mining in 1816; and what is that number in 1846? And is it not a fact, that mines have been opened and worked, which, but for the assistance of the Davy, were inaccessible? And is it not also a lamentable fact that, when an explosion occurs in a mine so circumstanced, the loss of all lives in the pit is a necessary sequence?—The third carries with it its own refutation. Other objections might be raised, and as easily answered; but this would not facilitate the solution of the question—Under what circumstances is the Davy unsafe? The lamp may be considered as a machine; for instance, a steam-engine boiler, under ordinary circumstances, and with careful management, we consider them perfectly safe, and, therefore, they are safe boilers; but, if the safety valves are overweighted, or not in working order—if it is deficient of water—if dirt is allowed to accumulate, until it prevents the free access of the water to the iron—in any of these cases it loses its distinctive property of safety; so with the Davy lamp the cases are similar. If the lamp is dirty, if it is injured in the texture of the gauze, or imperfect in its construction, it is decidedly unsafe. If the workman is allowed to use it until the gauze becomes red-hot, it then becomes unsafe; for, although carburetted hydrogen will not of itself explode by being in contact with the incandescent wire, yet sulphuretted hydrogen, under the same circumstances, becomes highly explosive—and as this gas is evolved from the action of moisture upon pyrites, it may, under the circumstances, be a more fruitful cause of accidents than is generally imagined. Coal dust flying against a heated lamp is a fruitful source of danger. An inquiry into the nature and circumstances under which the Davy becomes unsafe, is of the greatest moment, and, with your permission, I may probably again refer to the subject.—OPTIMUS: *Blackburn, July* 6.

MINING IN CORNWALL—TUTWORK AND TRIBUTE.

SIR,—Your correspondent, Mr. John Budge, is again making himself heard—not professionally, as heretofore—but in sympathy with the working miners. A man must be a blind observer of things about him, who associates (as he and I are called to do) with this class, and is not struck with the depravity of their (the miners') physical condition; but I am not disposed to contrast their moral and intellectual states, but advantageously, with those of any other class of operatives it has come in my way to notice. My vocation enables me to speak of his habits in many districts of Cornwall and Devonshire—my conviction is founded on experience gathered by periodical visits, and inquiries through 100 miles of underground route. I never contemplate his care-worn countenance and wasted appearance without the conviction, that something might be done for his physical welfare. Many schemes have I turned over and over in my own mind with that object—some of which have yielded me the richest consolation and pleasure that any successful application of one's labours could afford; and it is no small satisfaction, thus to have proof of the correctness of one's views on matters of public good and human suffering. I may say to Mr. Budge, that the public are long before they know, and tardy in adopting—so much so, that an inventor dies, his works become his monument, whereas they should furnish the foundation, sides, and roof, of his temporal habitation. Thus, it will be long ere his ideas will be received and acted on. There is certainly truth in Mr. Budge's sentiments: except that, I do not know what views or feelings could prompt him to say, that mine agents' situations are as sinecures; and I fear that his style, on the whole, is ill adapted to his purpose. It is the same with the mind of man as in physics: you cannot fire a ball into sand, but you may introduce your spade; and wax that is pliable to the finger, will not yield to the hammer. To dislodge a heavy body we do not employ an explosive, but a gradual force. The public opinion may be compared to a tremendous wheel, slow to turn on its pivot, until its inertia by little and little be overcome: a small force will give it first imperceptible motion, which is only to be increased by continuance. There is more that might be said on Mr. B.'s side of the question: let him go on, not forgetting to give the huge pivot *oil*, instead of *vinegar*. The north wind's fury cannot force off our great coats—it must be a warm sun: let Mr. Budge proceed by long and soft persuasion—then parties convinced will, for their own interest, adopt, as readily as they would cast off a garment under excess of warmth. Of all the ideas I have entertained for the miners' welfare, I have not been able to persuade myself, that the spirit of adventure which actuates the Cornish miner could be sacrificed to any system of operation. I admit that there is a species of deception consequent on the mode complained of—the miner is habituated or educated in this deception—he is compelled, in common with all the world, to exercise the tricks of his trade, which, I deem, are so numerous, that his wits are thereby sharpened, his judgment exercised, his body, gait, manners, and character, are stamped alike by the peculiar exercise of his vocation. There is one view of the disadvantage of irregular wages to the miner, which Mr. B. has not given—it is, that their wives are scarcely in a position to acquire careful habits, or to act on any sure system, for the "*making of two ends meet.*" If the woman says so much per month for this, and so much for that, going the round of essentials, knowing to a shilling her allowance from the labouring members of her family, she has the means of economising; but how frequently is it, that she is compelled to skulk from shop to shop, during periods of "poor speed," telling the truth as long as it answers her purpose, or until all credit is refused; then it is that, desperate more than ashamed, she ventures on a promise, made only in hope, to pay at an appointed time, and the creditor is not in a position to know the merits of the tale, any more than that it is more or less so with all miners,—and to have their money in prosperity, you must trust them in adversity; but the woman, having no control over the *hard ground* or *poor pitch*, her hopes are without hope—her feelings are more and more obtuse—she loses a taste for holding the plough aright, and gets credit by hook or by crook; and in case of a return of good luck, discouraged at the amount of arrears, prefers to luxuriate, without rule or prescription, as long as the money lasts, instead of rightly appropriating it. Now, for another view of the case—What is it that stimulates the miner?—where is there one that has not had his "start," or favourable reverse?—or what is it that has raised the greater number of dwellings, composing the little town of Camborne,—and that has studded the whole landscape seen from Carn Brea, with isolated miners' dwellings, like so many gems (and gems they are) of the system? What system is there besides, that enables the daily labourer to reside in his *own house?* It is puzzling to think how they manage it: one might suppose that the occasional good gettings of a month or two would be required to fill a chasm of debt, if not squandered as before noticed; but the fact is, the most conscientious among them consent to live under excessive privation, that is scarcely credible to relate, without reference to cases of distressed mariners. A man once came to me, and asked credit for a bushel of seed potatoes, which were so small and shrivelled, that I would not use them as such: being curious to know the result of their trial, I afterwards found they had been used by his family as food—let him read this, and be absolved of his debt. Thus, those dwellings may be looked at as so many proofs of excessive privation during adversity, and care in prosperity. Among them, it is not uncommon for a large cabbage boiled, adding pepper and salt, to compose a meal for many a working child. These are facts, sir, that few beyond the pale of suffering are aware of,—and the wonder is, that such can be in a land of plenty. They cannot exist but under a highly moral and religious restraint. *Yea, many of them feel that hunger and thirst must be borne for righteousness' sake,—and court the providential frown in full assurance of the smile.* I have often thought, that the prevalence of religion, the forcible repressions of its sentiments, and the extraordinary development of some of the young miners in the county of Cornwall, are mainly owing to the solitude of a tutwork end giving vast aid to the contemplation of their minds. As I think none can peruse these lines with levity, I will notice an occurrence, the most affecting, in connection with my journeyings. A night captain and myself were once approaching a pare of men in an *end*, composed of a father and two sons, at prayer, which was their daily practice before they commenced working; and the latter part of which I shall ever recollect. After praying against the dangers of their calling, they concluded thus—"Lord help us to endure thy will; we know not how to pray aright—our murmuring flesh telling us we have hard taskmasters, but we are told that the ground through which we drive is the work of thine hands; thou hast made every fathom; the captains' hearts are in thy hands; if they be careless of our sufferings, we pray thee give them true seriousness, assist their judgments, and give them faith in thy providence, to afford those under them a living price. Thou needest not our prayers, nor our words, knowing our wants before we ask; but we know that our sighings are acceptable to thee; and agreeable to thy commands, we pray—Our Father," &c.; at the conclusion of which I said, Now, captain, can you stand that? So much for praying men, and agents' soft hearts, be it said, he could not visit them for that round, and we retired together.

In expressing my views on this subject, and state of the miners' affairs, I may say (what I have too good a reason to be sure of) that it is common—yea, too common—for a miner, with a young and numerous family, to have food and raiment on credit, never to be paid for until his children are not only able to maintain themselves, but to contribute to the liquidation of their father's debt of twenty years' standing. It is a common attempt with them to pacify a creditor by the prospect of children's labours, whose sinews are scarcely yet developed. I once had an interest in a will—but to which I never administered—bequeathing 2000*l.* in debt, to be collected from the four parishes of Camborne, Illogan, St. Agnes, and Redruth;—besides this, I know something of credit giving, and much of the above district, wherein I do not know of four persons, who, in the supply of eatables, have fairly realised a competency. Grocers elsewhere in the county, are seen quite on a par with other merchants: of those in the above district who have realised fortunes, or any considerable property, the question is—whether they have not some other business to help it out, some luck in mining, or the power of coercion to deal; for I think it impracticable for a man herein to thrive solely by the business in question, unless his heart be composed principally of flint, in consequence of the credit system inevitable amongst the mines, by reason of the difficulty one has in refusing it for food.

I am afraid, sir, Mr. Budge has begun to meddle with things too hard for him: I have long looked with anxiety upon the "farthing pitch" affair as an evil inseparable from the mode of setting in Cornwall; but I am not so sanguine as to the remedy proposed by this gentleman. We all know that every intelligent and spirited miner despises the idea of working upon owner's account, while some there are who will do more for 6d. quick pay, than they could afford to do for a shilling deferred, especially if the 6d. be paid by three instalments of one pint of beer each; but it is not my object to discuss such characters. I proceed to say, that owner's account-labour is the worst purchased, for various reasons—1st, because the lame, lazy, and aged, only seek it; and should the able be compelled to accept of a job, he is disaffected at his pay. There was a man thus employed once; and being discovered not at his post, thought to try the effect of a joke, thereby to evade a fine; and beginning first, thus addressed his captain—"Capn Nickey, I shud have a fine easy place here, ef twornt for watchen the capns: aw man do never knaw when they be commen tawl; and ef aw eddn watchen othum all day long, aw is sure to be catched." This seemed not to have the desired effect, and the man again proceeded—"Sure nuff un capn, es this here es a croust in my hand, I haent taste a bit aw meat fore for the day, and I cuddn stand to work no longur, must come an taste n." "Well," said the captain, "I wish you a good appetite." "Ah—h, capn, that is aw bad wish for a man what heant gawt hafe bread nuff for to eat." Our agents are not naturally more tough in their feelings than others; but listening to so many tales of woe, without the means of relief, they, by some unaccountable accommodation of their natures, can witness distress without distress, comparatively speaking, like some cooks, who can actually, by practice, take eggs or potatoes out of boiling water, without scalding their fingers. To return—with the generality of men, I do not believe that, under propitious circumstances, and fair pay, there is a disposition to hang upon the chain; but this I think, that they generally would prefer being their own masters, venturing as on tribute, than to being wholly servile. The constant hope of a future success, I cannot help thinking, does a great deal for the Cornish mines: it is, in fact, the men that know a mine, as nothing escapes the "*thousand eyes of Argus,*"—so the numerous searchings of 500 men often keep up and lead to discoveries, that the captains are not in a position to effect, by any independent skill or vigilance; and according to the proposition of doing away with tribute, a man would or might be indifferent as to whether he worked upon this or that point, productive or otherwise; then it would wholly devolve on the captains to direct the *pick and gad* in every *core.*

As this letter is already too long, I trust I shall not be refused more room next week, as I have something further to say on the subject.

Pool, Illogan, June 28. A MOLE.

TUTWORK AND TRIBUTE.

SIR,—I think you will join me in opinion, that your correspondent, who calls himself "One of the Old School," should have sought instruction in a "new school," before he presumed to become a controversialist; for, if the sorry practice of "tutwork and tribute" can find no better advocates than him, it will be slain by the hands of its friends. The admissions of this writer go far to establish the position I have taken, respecting the evils and absurdities of setting mining operations by piecework. But he asks, if it is not likely that men will do more work when they have an *interest* in it, than when they have not? I have fully shown what sort of an *interest* it is, and how fearfully it operates; therefore, I need not go over that ground again; but let me tell this man, that a paramount object in mining is not merely to get the MOST, but to get the BEST, work done—for it often happens under the jobbing system, that by wrong drivings, "*the more work the more mischief:*" and they are still getting farther and farther from the desired object. Cases have been known where men have slipped from the true leading branch, to avail themselves of easier ground, and have driven scores of fathoms on a dead branch, and, after the mine has been abandoned, and again resumed by another company, it has been found, that a very rich course of ore was all the way within a few feet of them; and all your practical readers can testify that numerous "such like things" have happened, and are often happening. But this "old school" champion says, that our bal captains are clever men, and that "they *pride* themselves on their knowledge of the price of ground." *Pride themselves!* Yes, indeed, I know that well, but *pride* is not talent. I am persuaded there is not a more arrogant, bigotted, vain glorious, and superficial set of officers in any department, than those which form the main body of the staff of metallic mining (although there are some worthy exceptions), and the cause is evident. They are untaught, undisciplined, uneducated men. You know well, Mr. Editor, that there is no profession under heaven that requires the aid of science, in all her multifarious powers, more than mining; but you will find the majority of these *accomplished* captains affect to contemn and despise erudition, although nothing can be done well in thier department without it. It was the losses sustained by mining, through the ignorance of the agents, that induced my honourable patron, John Taylor, Esq. (one of the most profound and celebrated miners of the age), to put forth all his powers and influence to establish a Mining College in this county; and the same motive subsequently induced Sir Charles Lemon to be at a vast expense in carrying on a preliminary school; but the pride, ignorance, shame, and laziness, of the operative part of the mining interest refused to co-operate with these gentlemen, and the great desideratum of a mining seminary was abandoned. But this writer says I have not shown how the wages, or day work system, is to be carried out! I reply, if Mr. "Old School" is a miner, he ought to know that there is neither difficulty nor mystery in the matter. My suggestion is—let the *mark* be kept up as formerly, and let the captain keep a register of the ground broke by every pare of men every day; it is not a minute's work to draw the line or chain, and make the entry—and surely he can judge better if men do fair labour day by day, than if he lets it run unnoticed and unchecked for a month, as the practice is now. Let us take a case—suppose Capt. "Old School" has a pare of men driving the end west, in the 90 fm. level, and his chequebook showed the daily drivings to be as follows:—July 1, 1846, 1 ft. 7 in.; 2, 1 ft. 5 in.; 3, 1 ft. 10 in.; 4, 1 ft. 8½ in.; 5, 2 ft.; 6, 1 ft. 6 in.; &c. Now, if his judgment is sufficient to satisfy him that the ground was as favourable on the 6th as it was on the 5th, it behoves him to point out the deficiency to the workmen, and warn or admonish them, but not like a ruffian or a bully, as is generally the case—let it be done in an officer-like manner. Remember, Englishmen are freemen; and there is not one man in a thousand but will work better with rational and kind language than with the detestable hectorings, and unmanly and unmerited abuse, with which they are so commonly insulted by the captains. At the end of the month, let the captain sum up his book, and make his estimate of the value of the work done; and I will engage to say, that under this system, there will rarely, if ever, be a case but what the captain's estimate will show, that the men have fairly earned their wages. The same check may be effected, if men are breaking ore on the course of the lode, and if stoping or breaking ore in the backs, the captains know well that they can tax the work daily, so as to know what men are doing; but I contend, as I have before stated, that miners will work well if they are well paid, and my judgment is, that no miner ought to get less than 3*l.* a month. Do not let it be supposed, that the men who are selected to the captainship are always the best miners—this is not the case. A partial influence is often at work here—some flatterer, or partizan, or cousinship, or petticoat interest, prevails—therefore, the *judgment* of the working miners should be valued, elicited, and encouraged. Captains will sometimes show, as an epitome of the earnings of the tutwork men averaged, that they have earned some 50s. a man—and thus, to a superficial observer, they boast how nicely they have estimated the work; but let some cunning critic turn back the leaves of the cost-book, and he will see that some have earned 5*l.* or 6*l.* a month, and some less than 1*l.* a month—and thus his boasted judgment may be "thrown to stull," for he cannot make men of common sense believe that "two crookeds make one straight."—JOHN BUDGE: *Callington, July* 6.

MINE SURVEYING.

SIR,—The appearance of Mr. J. Budge's letter on "Tutwork and Tribute," in your Journal of the 20th June, convinced me that it was a prelude to his favourite subject "Mine Surveying." Every mine agent would (no doubt) feel obliged to that gentleman for any remarks which he might be pleased to make, in order to assist them in carrying out their mining operations; but it is notorious, that he has sought every opportunity to depreciate their services, in order to enhance the value of his own. It must be understood, that I am not one of those persons (alluded to in Mr. Budge's letter), who have made such mistakes in dialling, and, therefore, do not write in self-defence. I am well aware, that there are mine captains in every mining district, who are not qualified to make subterranean surveys; but it must be allowed, there are many in this county who are first-rate diallers—men who are qualified to undertake the most difficult survey—and yet the majority of them know no more of mathematics than Mr. John Budge does of the practical working of a mine. It is true, that a knowledge of trigonometry greatly facilitates the carrying out of a survey, but I have seen very good work done by those who do not know what trigonometry means. Mr. Budge has worked hard in endeavouring to convince mine directors, that a knowledge of mathematics is indispensable to a correct subterraneous survey. Now, if a man, blessed with his knowledge, was capable of dialling without ever making an error, I would ask, why has this mathematician himself made errors so glaring, both in dialling and levelling, in mines not many miles from the Caradon Hills? and why, therefore, has he had the effrontery to expose the errors of others, without even mentioning those of his own? Why not deal fairly with the unlearned as well as the learned,—and confess to the mining public the fact, that the professional surveyor is as liable to make blunders as is the mining captain? But does Mr. John Budge really think, that there are no mine agents as capable of making a surface or underground survey as himself? If so, it would be as well to prove it; and the writer of this would have no objection to engage to make the most intricate subterraneous survey against that gentleman at any time. This would, in my opinion, be the best plan to put an end to a controversy which has been pending for years, and which has not (down to this very moment), produced the least good effect.—THE — MINER: *Callington, June* 8.

INDIA AND LONDON LIFE ASSURANCE COMPANY.—Numerous as have been the associations formed within the last 20 years for the purpose of life assurance, it would appear evident, from the statistical returns of the kingdom, that the principle is still but in its infancy, and that an enormous majority of those whose means are ample, have still to be impressed with the importance of life assurance to their survivors. Out of the immense population of these kingdoms—now most probably exceeding 25,000,000—the total number of life policies issued does not much exceed 100,000: there would thus appear plenty of room for other institutions; and we have now before us the prospectus of one under the above title, established for affording the most ample benefits, which a correct system on a firm basis can supply. In addition to the assurance of healthy life in Europe, this company proposes to take military and naval officers, including foreign and colonial services, and also civilians in, or proceeding to, India, or other parts of the world; also to effect assurances on the lives of *persons afflicted with any bodily or mental disease*, and endowments for widows and children. The capital of the company is 250,000*l.*, to be increased to 1,000,000*l.*, should the transactions render such increase desirable; and, for the accommodation of some classes of the assured, a half premium table has been constructed by which no *debt* is incurred—consequently, no interest charged, and no deduction made from the amount of policy. By means of this table, a policy of assurance may be effected for the whole term of life—the only way in which a provision can be *secured* for a surviving family, or a debt to a creditor, at a rate of premium very little exceeding, in the first instance, the rate required for an assurance for a short term of years. Thus the benefits of life assurance in the case of select lives are extended so as to combine the least possible present expense with the security and advantage to be obtained only, in ordinary cases, by payment of double the amount of annual premium. Both the European and Indian rates of premium are as low as is consistent with the safety of the company, and the company appears to be founded on a principle highly advantageous to the public.

HAND-IN-HAND BUILDING SOCIETY.—It will be perceived, on reference to our advertising columns, that this society, whose first meeting we so recently noticed, is about to make its first distribution of shares on Wednesday next. From the highly respectable names of its trustees, and the equitable scheme on which it is founded, we could have anticipated no other than a favourable result. It affords proof that, where no more is promised than can be justly performed, great benefit must accrue to its members. We wish the Hand-in-Hand Society all the success it so justly merits.

ROYAL POLYTECHNIC INSTITUTION.—Dr. Ryan is at present delivering a course of lectures on the Philosophy of Heat and Cold. After introducing the subject, by treating of the various sources of heat, Dr. Ryan proceeded to consider the change of condition produced by this imponderable in every description of matter. His illustrations of this department of his lecture were most happy and numerous, comprising a condensed description of thermometers and pyrometers. Under this head, he also explained very simply and beautifully the theory of ventilation, the cause of trade winds, and land and sea breezes. The lecturer then proceeded to consider the communication of heat—first, by conduction and conviction; secondly, by absorption and radiation. Under the latter head, the doctor explained most concisely and satisfactorily the theory of dew, and the cause of its desposition on some surfaces and not upon others. The lecturer showed, by numerous well-appointed experiments, that those bodies which absorb heat rapidly, have also the power of radiating caloric with great rapidity, and, therefore, they cool more quickly than more reflecting surfaces. Thus, while the grass and the earth absorb heat in the day more rapidly than the smooth gravel walk, yet, after the sun-set, the pr ocess of radiation, going on the dark surfaces, continue to cool by radiation, until the moisture of the contingent air is condensed into dew.—Lastly, the talented doctor explained the sensible and latent conditions of heat, showing the cause of the changes in temperature of bodies produced by the passage of matter, from the solid to the liquid, or from the liquid to the aeriform state, and *vice versâ*.

MINING IN CORNWALL AND DEVON.—No. II.

South Caradon Mine.—This mine, which forms one of the "clique" of Caradon Hill, may boast of being the earliest "bal" in this immediate locality, which has conferred on this part of the county the title of a mining district, having, on a capital expended of 576*l.*, divided no less than 51,200*l.* However, our office is to continue our statistical detail, and leave for an after period such general remarks as we may feel called upon to make, as regards the district generally. This mine is situate in the parish of St. Cleer, on the south-western part of Caradon Hill, and between the East Caradon and West Caradon Mines; the operations of the former being principally confined to exploring the lodes at the adit level, the latter highly profitable; the extent of the sett may, in round numbers, be taken at 600 fathoms east and west on the range of the lodes, and about 800 north and south, containing upwards of 20 lodes, of which only 5 have been explored. It is held under lease from G. P. Norris and J. Lopes, Esqs., for a term of 21 years, to which an extension has been made of 10 years (or, in all, 31 years), of which some 21 or 22 years are unexpired; the dues are $\frac{1}{15}$th. The meetings are held every alternate month at the count-house on the mine, the management being in Cornwall on the cost-book system. The principal officers on the mine are—Mr. Thomas Kitto, purser, and Mr. James Clymo, manager; Capt. William Rule and Capt. Budge Clymo, underground agents; Capt. Opie, surface captain and superintendent of the dressing floors; and Mr. Hennah, clerk. The mine is divided into 128 shares, on each of which 4*l.* 10s. has been paid, making a paid-up capital of 575*l.*; while the dividends received amount to 51,200*l.*, or 400*l.* per share, being nearly equal to 100*l.* for every 1*l.* adventured; the accounts are made up every two months, examined and passed, when a dividend is declared—the amount per share paid for the past six months being 30*l.* per share. The monthly cost is from 1600*l.* to 1700*l.*, and the returns, say, 2350*l.* There are four steam-engines erected, one of 30-inch and one of 40-inch cylinder, employed in pumping, a combined cylinder engine for drawing, and a 26-inch for stamping and crushing—in addition to which there is a water-wheel employed in drawing, of 25 feet diameter, by 3 feet 6 in. in the breast; there is also a water-wheel applied to a jigging machine, 18 feet diameter, by 2 feet 6 in. breast. The direction of the lodes is nearly east and west, with an underlay north, yielding a produce of about 9; they are composed of peach, fluor spar, and ore. There are four working shafts, known as the old engine-shaft, which is 100 fathoms below the adit, which at this point is 20 fathoms, making together 120 fathoms—this being the lowest point of working. The new engine-shaft is sunk 40 fathoms below adit, which is here 40 fathoms—making 80, the entire depth from surface. Lopes' shaft is down to the 70 fathom, and Pearce's to the 80 under adit, which in the latter case is about 35 fathoms; the workings have, taking the extreme ends east and west, without reference to any one particular level, been extended to a length of 330 fathoms. The number of individuals employed on the mine, including the "maidens," may be taken at 400, of whom 250 are at work underground in their usual eight hour cores. The average rate of wages of miners, taking tribute and tutwork together, is about 55s. per month; the quantity of ore raised per month may be taken at 350 to 400 tons; but this varies, as may be seen by the Ticketing Paper. The estimated quantity of coal consumed is about 70 tons per month, and from 10 to 12 loads of timber. All materials are supplied by tender, and the mine is worked as an *adventurers'* mine—a distinction we should much like to see observed more generally throughout the county. We may add, the strata, or country, is granite, and the distance from Looe, the shipping port, is 12 miles, which is reached by railway and canal, the former communicating by branch with the dressing floors; the cost of carriage to point of shipment 6s. per ton.

Wheal Gill.—This mine, although not immediately in the Caradon district, may be considered as one coming under notice in the course of our excursions, being situate in the parishes of St. Cleer and St. Eve, and south-east of the Caradon Mines. The extent of the sett is about one mile square, the term of lease unexpired being about 18 years, at dues of $\frac{1}{15}$th, and held under Mr. Moon and Mr. Stroud; the purser is Mr. Taylor, and the agent on the mines Capt. F. Faull. The meetings of the adventurers are held every two months at Liskeard; and the mine is divided into 256 shares, on which 27*l.* per share has been paid—of which sum a call of 2*l.* per share has been made within the past two months. The monthly cost may be taken at 160*l.* There is about 25 tons of ore on the floors, of good produce—say 11 per cent.; 80 tons of jack (blende) was lately sent off, price 50s. at Bristol. The ores are shipped at Looe (a distance of about 12 miles), the carriage of which is 6s. 3d. per ton. An engine of 50-in. cylinder, with 9-ft. stroke, is employed; but the quantity of coal used is inconsiderable, being about 15 tons monthly; there being a water-wheel of 50-ft. diameter, and 2½-ft. breast, which is used for drawing and crushing; there is also a 21-ft. wheel, 4-ft. breast, which was formerly employed to throw back the water—an utopian scheme, but which is not now used. In winter the charge upon the fire-engine for fuel is but trivial, as the water-wheel does full and effective duty. Seven or eight lodes have been discovered, five have been seen by cross-cut, but one only worked upon; the lodes running nearly east and west, underlaying north 1½ to 2½ ft., and are composed of peach, mundic, and ore. The produce of the ore may be taken at 9½, although that at present on surface is, we believe, estimated at 11½. Three shafts have been sunk—viz.: the engine-shaft 54 fathoms under adit, which, at this point, is 6 fathoms; the western shaft is 10 fathoms under adit, which is here 10 fathoms—making 20 fathoms from surface; and the eastern shaft, sunk in a kindly killas ground, has been put down 18 fathoms from surface in the past eight weeks, so that it will be seen it is speedy ground. The lode has not been seen at a greater depth than 40 fathoms, while the engine-shaft is down to the 54, and is calculated to take the lode downright at the 80. The number of men employed underground is 27; the average rate of wages being somewhere about 60s. per month. The country here is south-east of the granite, and is in killas, the ground going east having changed to a kindly description. The depth of adit, as already observed, is from 6 to 10 fathoms. Five cross-courses have been met with, one west of the engine-shaft, and four east; the latter being found within the limit of 20 fathoms; the first heaved the lode 6 fathoms north, the second 2½ fathoms south, the third 3 fathoms, and the fourth again 3 fathoms south—thus making in the distance a difference of 2½ fms. south, on the run of the lode. A bunch of ore was met with driving east, in the 16 fathom level, and which has been cut at a further distance east, in sinking the new shaft, which is going down on the dip of the lode—making the length from the point of its being first discovered about 10 fms. This discovery at so shallow a depth in virgin ground, and the alteration for the better in the nature of the rock, is a source of gratulation to the shareholders—as, from the depth to which the workings have been carried in the western part of the mine, every hope is entertained, by continuing the levels east, that the bunch of ore may be found to hold down.

Wheal Agar.—The situation of this mine is immediately west of South Caradon, and east of Caradon Consols; it is bounded on the north by West Caradon, and contains the south lodes of South Wheal Caradon and East Caradon Mines. The extent of the sett may be taken at from 380 to 400 fathoms on the run of the lodes, and about 500 fathoms north and south. A lease, of which 20 years are unexpired, is held under Lady Agar, at $\frac{1}{15}$th dues: the management of the mine devolving on Capt. James Rickards; and Mr. Petherbridge, of the East Cornwall Bank, Bodmin, acting as purser. The management of the mine, as relates to its financial matters, is on the cost-book system; the mine being divided into 128 shares, on which calls are made from time to time, as the extent of the operations at the mine may require. Up to the present time, we believe, 16*l.* to 18*l.* per share has been paid; but, not having the opportunity of seeing the purser, we assume the latter, which would make the amount of capital embarked in the mine 3300*l.*; the average monthly costs do not exceed 45*l.* to 50*l.*, the workings being limited to driving a cross-cut south to intersect the lodes in that direction, the shaft not being in course of sinking. The shipping port is Looe, the carriage from which may be taken at 6s. per ton. There is a water-wheel, 40 feet diameter, and 3 feet across the breast, which is equal to put the mine down 100 fathoms, without requiring other machinery; 15 lodes have been discovered, the range of which is east and west, and the underlay generally 1½ feet in a fathom—underlaying north. No ore has yet been sampled for ticketing, but some 5 or 6 tons have been raised, being stones found in the lode, the produce of which is far above the general average. The nature of the lodes is fluor, gossan, spar, and peach; one shaft only has been sunk, which is 48 fathoms from surface, or 40 fathoms under adit, which latter is 8 fathoms deep. The number of men employed is limited, there being only 10 underground—and at surface the workings, as we have already observed, being confined to driving the cross-cut. We cannot well imagine, in a locality of the nature which it is, immediately touching South Caradon, on the east and West Caradon on the north, why the shaft should not be sunk with all dispatch. It is true, that the shaft is pitched near the boundaries of the South and West Caradon: and as the lodes underlay north, there may be some reason why the shaft is not put down, and that the present workings are with the view of ascertaining whether the south lodes hold out an inducement for sinking a shaft further south: this is, however, a speculative opinion of our own; but, if some such cause do not exist, we must confess we are at a loss to guess why the sinking of the present shaft is suspended. The adit, as we have stated, is 8 fathoms deep, which is driven on the course of a lode, and the present cross-cut is on a cross-course, the width of which varies from 10 to 15 feet, and is found to heave the lodes from 4 to 6 fathoms. Six lodes have been cut south of the shaft, the size of which varies from 1 to 4 feet.

Craddock Moor.—This mine is situate in the parish of St. Cleer, north-west of West Caradon and west of Gonamena; the extent of the sett is about half a mile on the course of the lodes, and 370 fathoms north to south; the term of lease granted having 19 years to run. The sett is held under G. P. Norris, Esq., at $\frac{1}{15}$th dues. The financial affairs of the company are under the management of E. A. Crouch, Esq.; and the control of the mines under Capt. John Roberts, resident agent, and Capt. James Nance, who is inspecting agent. The mine is conducted under the ordinary cost-book system, and meetings of the adventurers held every alternate month. The number of shares into which the mine is divided is 240, on which 11*l.* per share has been called; while the amount expended is about 2460*l.* The present monthly cost may be taken at from 120*l.* to 130*l.*; the cost of carriage of ores and materials are alike with the mines immediately adjacent—the distance from Looe, the shipping port, being 13 miles by railway and canal communication. There is a rotary engine, 16-inch double, four strokes in the cylinder to one in the shaft, employed in drawing water and stuff. Thirteen lodes have been discovered, of which two have been worked upon, ranging nearly east and west, or 8° north of west, with underlay of from 10 to 36 inches in a fathom north. The nature of the lode is quartz, fluor, gossan, and yellow copper ore. There are two shafts at present sinking on the course of two lodes, 57 fathoms apart on the south side of the sett, the north shaft being down 20 fathoms and the south shaft 8 fathoms; there are several other shafts sunk on other lodes, varying from 5 to 10 fathoms in depth; the number of men employed is about 26; the average rate of wages for miners being 60s. per month. The quantity of coal consumed monthly is from 11 to 12 tons; the country (or rock) is granite. There are two cross-courses, heaving 6° south of east.

Caradon Copper Mine.—This mine is situate south, and within a quarter of a mile of South Caradon; the length of the sett on the run of the lodes is 500 fathoms, and 250 fathoms wide. The sett is held under — Morshead, Esq., for a term of 21 years, of which 19 are unexpired, at $\frac{1}{15}$th dues. Mr. Thomas Webb, of Liskeard, is the purser; and the management of the mine devolves on Capt. Rule, of the South Caradon Mine. The management is on the cost-book system, and the mine divided into 256 shares, on which calls are made from time to time, as may be required—the amount at present paid being 7*l.* 10s. per share, or 1920*l.* in all. There are no specific times appointed for meetings being held; but, when such take place, they are at Webb's Hotel, Liskeard. The whole amount called, within the past six months, is only 1*l.* per share; the average monthly cost is about 60*l.*; the distance from shipping port is nearly 14 miles, the cost of carriage of ores and materials being 6s. 6d. per ton. There is a water-wheel of 36 feet diameter, 3½ feet across the breast. Eight lodes have been already discovered, the direction of which are about east and west, underlaying about 2 feet in a fathom south; the lodes are composed of gossan, prian, peach, and soft spar, with lead and jack, and also containing occasional stones of black and yellow ore. Three shafts have been sunk, the engine-shaft being down 30 fathoms, Morshead's 8 fathoms, and Kingdon's 6 fms. Levels have been driven on the course of the lodes, about 120 fathoms, and cross-cut also driven north and south of a like extent. The number of men employed does not exceed 14—viz.: 12 underground and 2 at surface; the rate of wages paid being 63s. per month tutwork, and 50s. per month at surface. The nature of the country is a soft killas, thus differing from the generality of the mines in the immediate locality, or rather that of Caradon Hill; the depth of adit is 9 fathoms, and one cross-course has been met with running north and south, which heaves the lode left.

East Caradon.—This mine is situate east of and adjoining South Caradon, and west of Tokenbury Mines; the extent of the sett being about 350 fathoms east and west, and about the same distance north and south. The term of lease unexpired is about 14 years, and the sett is held under Sedley Mark, Esq., and others, at $\frac{1}{15}$th dues. William Foster, Esq., is the purser; and the practical management of the mine devolves on Capt. James Clymo, of Liskeard. The mine is conducted on the cost-book system; the shares being 112 in number, and the amount paid per share being 40*l.*, the total expenditure being 4480*l.*; there are no fixed meetings of adventurers, but who are called together from time to time by the purser to receive the accounts, and make the necessary calls; the average monthly cost may be taken at 50*l.* The distance from shipping port is 15 miles, the cost of carriage being 7s. per ton. No machinery has been erected, the workings being confined to driving the adit level. Six lodes have been discovered, which may be assumed as those passing through the South Wheal Caradon and West Caradon setts; the range, or direction, of the lodes is from 2° to 8° south of east, the underlay being north 2 to 3 feet in a fathom; the lode now working on is 18 inches wide, composed of soft spar, peach, and copper ore; there is only one shaft, which has been sunk 20 fathoms deep. The adit level, and other points, have been driven in all about 500 fathoms; the number of men employed at present does not exceed 9 or 10, the rate of wages being from 2*l.* 10s. to 3*l.* per month; the strata (or country) is granite, bordering on killas; the deepest point of the adit is 35 fms. from surface; only one cross-course has been discovered.

Tokenbury Mine.—This mine is situate in the parish of St. Ives, and is east of East Caradon, and the mines on that line of ground—South Yeoland and Wheal Sedley being to the east; the extent of the sett is about 300 fathoms on the course of the lodes. The sett is held under lease from John Eliott, Esq., for a term of 21 years, of which about 20 are unexpired, at the dues of $\frac{1}{15}$th. The practical management, as relates to the working of the mine and underground operations, devolves on Capt. Trelease, and the financial arrangements on E. A. Crouch, Esq. The mine is carried on under the cost-book system, the number of shares into which the mine is divided being 128, on which 18*l.* per share has been paid, making an outlay of 16,896*l.* Meetings are held at Liskeard every two months; the calls during the past six months amounting to 13*l.* per share, or 1664*l.*; the average monthly cost is 295*l.*; the distance from shipping port, and cost of carriage, is the same as other mines in the immediate locality. There is a rotary engine, 22-in. double, with 5 ft. stroke, working 17 strokes per minute in cylinder, or 6 strokes per minute in shaft. There are full 20 lodes in the sett, and ore has been found more or less in most of them so far as they have been pursued; the range (or run) being nearly east and west, with an underlay north of from 1 to 4 ft. per fathom; the lodes partake of the general character of the district, with spar, peach, mundic, and ore. There are two principal shafts sunk—Crouch's to a depth of 65 under deep adit, and D shaft 20 fathoms under ditto; upwards of 400 fathoms of ground have been driven at the several levels. The quantity of coal consumed monthly is about 20 tons. The nature of the country is granite immediately west, and killas as going east; the depth of adit is about 25 fathoms from surface at Crouch's shaft, and 40 fathoms at the D shaft. There are two principal (or main) cross-courses, taking a direction north and south.

South Yeoland.—This mine is situate in Linkinhorne parish, and adjoins Tokenbury Mine on the north; the extent on the course of some of the lodes may be taken at about 400 fathoms. The sett is held under lease from Mrs. B. Doidge, at $\frac{1}{15}$th dues, for a term of 21 years, 18 of which are unexpired. The management of the underground workings, and the practical department of the mine, is confided to Capt. Trelease, the agent of the adjoining mine (Tokenbury), while the financial affairs of the company are confided to Mr. E. A. Crouch, who fills the office of purser. The mine is carried on under the cost-book system, two-monthly meetings being held. The number of shares into which it is divided is 128, on which 18*l.* 10s. per share has been paid; the amount expended is about 17*l.* per share, or 2175*l.* The amount of calls during the past six months has been 3*l.* per share; the average monthly cost is about 60*l.* The distance from shipping place, that of Looe, is 11 miles; the carriage of ores or materials being the same as the adjacent mines. No steam-engine has been erected, but a pressure engine is worked by a column of water, of some 25 fathoms high. Several lodes have been discovered, but only one worked upon—the direction being east and west, with an underlay north. The lode is composed of peach, spar, mundic, with spots of ore. Only one shaft (Croker's) has been sunk, which is down to a depth of 50 fathoms under adit. Some 10 or 12 miners are employed; the average rate of wages being 3*l.* per month. The nature of the country is granite, and an adit has been driven at the depth of 20 fathoms; two or three cross-courses have been met with, having but a trifling underlay.

Yeoland Consols.—This sett, which is a small strip of ground between Tokenbury and South Yeolands, the lode passing through which is connected with both setts, is worked on joint account—one moiety of the costs being charged to South Yeoland, and the other to Tokenbury, which are included in the several accounts. There is only one lode running east and west, and underlying north.

Wheal Pollard.—This mine adjoins Craddock Moor to the west, and is a continuation of the lodes in that sett, and is about 400 fms. in length, on the run of the lodes, and about 100 fms. in width. Twelve lodes have been discovered by costeaning or open cuttings, and one cross-course. A cross-cut adit has been extended 50 fms., and communicated with the engine-shaft, which is about 19 fms. deep, and 9 fms. below adit. The mine is worked by water-power, having a 30 feet water-wheel, with 4 feet 2 in. breast. The number of men employed for the past six months is about 12—the average wages being about 60s. per month. The cost of working the mine may be taken at about 55*l.* per month, exclusive of the water-engine. The engine-shaft is sinking on a lode composed of fluor, quartz, and capel,—and, a few fathoms to the north of the shaft, there is another lode, with fluor, and spots of copper ore, on the back. Some trials have been made on several lodes, discovered in the sett, to the depth of 5 to 6 fathoms; but the two lodes at and near the engine-shaft appear to be the most promising.

Westcott Mine.—This mine is situated in the parish of Linkinhorne, north-east of Caradon Hill about 2½ miles, and extends 800 fathoms on the run of the lodes, and about the same distance north and south. It is held under the Duchy of Cornwall, and Thos. Short, Esq., at $\frac{1}{15}$th dues, for a term of 21 years, 19 of which have to run. The management is under Mr. George Geach, of Bodmin. The mine is divided into 256 shares, and is carried on under the cost-book system. An engine-shaft has been sunk 40 fathoms under the adit, which is 12 fathoms below surface—thus making the depth 52 fathoms. Three lodes have been discovered, on two of which levels are being driven at the 15, 30, and 40 fathoms. About 20 men are employed underground—the average rate of wages being about 60s. per month. The lodes, three of which have been worked on, run east and west, underlaying south from 3 to 4 feet in a fathom. The lodes are composed of spar, mundic, fluor, lead, and copper: the country, or strata, in which the lodes are, being killas. There is a water-wheel of 27 feet diameter, with 6 feet breast—there being ample supply of water all the year, even in the driest season, from the River Lyner, sufficient to put the mine down 200 fathoms. In addition to the lodes worked upon, several others have been discovered, including a caunter or north and south lode, composed of spar, flookan, with mundic, and spots of lead. There is also a large elvan course, running north and south. The mine is distant from Calstock, the shipping place, 13 miles—the cost of carriage being about 8s. per ton. The present workings are confined to the levels already mentioned. A small parcel of lead is at grass, and the mine is prosecuted with spirit, with every expectation, from the indications which present themselves, of a successful issue. The granite is immediately contiguous to the killas in which the lodes are; and from the immediate contiguity to the junction, holds out additional prospects, judging from other mines similarly situated.

Wheal Trelawney.—This mine is situate in the parish of Menheniot, about five miles south from Caradon Hill, and three miles south-east of Liskeard; the extent of the sett, on the course of the lodes, is about 400 fms., and is held under lease of 21 years—19 of which are unexpired; the dues are $\frac{1}{15}$th. The lords are—C. Trelawney, J. Carthen, and J. Tobey, Esqs.; the purser and manager being Capt. Peter Clymo, jun., and the captain, or practical agent, Capt. Henry Vivian. The management of the mine, as regards its pecuniary matters, is strictly on the cost-book system, and is divided into 260 shares, on which 7*l.* 10s. per share has been paid, or 1950*l.* in all—while the dividends during the past six months have amounted to 12*l.* per share; 4*l.* being dividable every two months, amounting in all to 3120*l.* during that period. The average monthly cost is 440*l.*, and the returns 950*l.* The distance from shipping port is six miles; the cost of carriage of ores and materials being 5*l.* per ton. An engine of 22-in. cylinder is at work, with 6 ft. stroke, working 9 strokes per minute. One lode has only been discovered or worked upon—its range being north and south, with an underlay east, of about 1½ ft. in a fm.; the lode is generally composed of fluor spar and lead, and contains a portion of silver. Two shafts have been sunk; the old engine-shaft being down 45 fathoms, and the new engine-shaft 3 fathoms, from surface: four levels have been driven to the extent of 350 fathoms. The number of men employed underground is 70, and at surface those employed amount to 60—the average rate of wages being 2*l.* 15s. per month for tutworkmen; the quantity of coal consumed monthly is about 30 tons; and the strata, or country, blue killas. The adit is 6 fathoms, driven in a north and south direction: no cross-courses have been seen.

Wheal Mary Ann.—This mine is situate in the parish of Menheniot, immediately adjoining the Wheal Trelawney Mine, on the same lode, and may, indeed, be considered a part and parcel of that sett, if the views entertained by certain adventurers in the latter be correct, and so decreed by the arbitrators to whom the question is referred. The extent of the sett is 450 fms. on the course of the lode. A lease, of which 20 years are unexpired, is held under Miss Pollard, at $\frac{1}{15}$th dues; and the mine is carried on under the cost-book system—Capt. Peter Clymo, jun., being purser and manager. The number of shares into which the mine is divided is 256, on which 7*l.* 10s. per share has been paid. The total amount expended, including bonus for the sett, being 1670*l.* (1000*l.* being, as we are given to understand, paid as part bonus to the lady on granting the sett, with an undertaking to pay another 1000*l.* out of the profits, and 12 free shares, or about $\frac{1}{20}$th part of the profits thus reserved, in addition to $\frac{1}{15}$th dues.) There are no specified time for holding meetings of the adventurers, but which are convened at such times as seem meet at Liskeard. The amount of calls, made during the past six months, is 1*l.* 10. per share; the average monthly cost is 60*l.* The distance from shipping port, six miles; cost of carriage, 5s. per ton. There is no engine or water-power employed, as the lode is drained by the adjoining mine of Trelawney, it being the same lode south of that sett: only the one lode has been discovered, which runs in a north and south direction, underlaying east about 18 inches in a fm.; the nature of the lode being in every respect similar to the adjoining mine, containing fluor spar and lead. Two shafts have been sunk—the engine-shaft being 17 fathoms deep, and Barrett's shaft 15; but one level has been driven, which is to the extent of 100 fathoms, the greater part on the run of the lode. There are but 15 men employed—the average rate of wages being 55s. per month; the strata, or country, is blue killas; the depth of adit is 17 fathoms. At the time of writing, we are given to understand, the lode is worth 40*l.* per fathom.

Caradon United.—This mine is situate south of Caradon Consols and Wheal Norris, and west of St. Cleer Consols: it is divided into 256 shares, on which 27*l.* per share has been paid—making the total amount 6812*l.*—and held under lease from Capt. Morshead, the lord of Torr, and the Rev. J. Pomery, lord of Penhale; there being 19 years of the lease unexpired. The management of the mine is in London; meetings of the committee—consisting of Messrs. George Mackay, John Browne, O. H. Smith, and J. Edwards—being held monthly; and Messrs. Watson and Cuell, of St. Michael's Alley, acting as honorary secretaries; Mr. W. D. Boase, of Liskeard, being the purser of the mine. The sett extends about 600 fathoms on the run of the lodes. The present monthly cost may be taken at 120*l.* Several lodes have been discovered; and the mine may be said to hold out good promise. The engine is a 45-in. cylinder; the shaft is down 28 fms.; and at the 30, it is intended to drive to intersect the principal or northern lode. In Penhale, the adit has been driven about 220 fathoms.

Victoria Mine.—All hail! Victoria! yet thy star is set—thy existence was but brief, and not even royalty could protect thee from thy fate. Alas! Victoria is no more! for, notwithstanding the aid of *sovereigns*, the pit, which was sunk by those who most lauded thee whilst living, has closed upon thee for ever. No longer shall the pick and gad resound in cheerfulness—no more the count-house punch be handed round to wish thee brighter days; nor shall the yule log blazon on the now deserted hearth. Thy glory is fled! the lustre which thou shed around in thy halcyon days is for ever gone, and now, alas! we mourn the loss of the last sovereign, so much endeared to us. Reader, be not alarmed, it is simply that "the bal is knacked." [*To be continued in next week's Mining Journal.*]

Erratum.—Marke Valley Mine.—In our report of this mine, it is stated the quantity of ore raised monthly to be 40 tons—this should be 100 tons. The error, however, would, doubtless, be apparent, from the returns and produce of the ore, as given in another part of the report.

METALLURGICAL TREATMENT OF LEAD ORES.—No. VII.

Mixed Treatment of Galena.—The treatment of galena by iron is principally confined to Germany and the north of Europe. It is nearly always employed with complicated ores, such as argentiferous and cupreous galenas, as well as those mixed with blende. This circumstance renders this mode of treatment generally tedious, because the ore undergoes successive fusions [illegible] less iron than is necessary at each successive operation to de[illegible] the ore, matts and lead are thus produced. These matts are agai[illegible]d in the same manner; and, by continuing the fusions, the copper becomes concentrated, so to speak, into a true cupreous matt, which is treated in part like black copper, &c. Not only is iron employed as a desulphurating re-agent, but the ores and the matts are roasted—so that, in this mixed process, all the phenomena which occur on the ore-hearth, in conjunction with those occurring in the treatment of raw galena by iron, take place. In order to give a clear idea of this process, it suffices to give an example of a cupreous mineral, and an ore contaminated with blende. At Holzappel, where a cupreous ore is worked, the rich is treated in a reverberatory furnace, but the poor on the slag-hearth. The ore is roasted within three walls, and the operation pushed to the point where the whole softens and agglutinates. The roasted ore contains—Silica, 7; oxide of lead, 36; sulphate of lead, 19; oxide of iron, 6; oxide of zinc, 27; oxide of manganese, 2; sulphuret of lead, 3 = 100. Hence we have formed variable mixtures of many sulphates and silicates, with the free bases present. The ore in general contains copper pyrites, and it was by accident that the portion analysed was exempt. The roasted ore is fused on the slag-hearth with the addition of forge slags, which serve as a flux, owing to the large quantity of protoxide of iron they contain. A first matt is obtained, which is re-fused—this new fusion produces a second, which is again fused in its turn, and thus the copper is concentrated in a last matt, which is finally treated for black copper. The composition of these matts is, according to M. Berthier, as follows:—

	First.	Second.
Sulphuret of lead	72·4	56·7
Sulphuret of copper	23·3	33·7
Sulphuret of iron	3·6	5·2
Sulphuret of zinc	traces—99·0	3·4—99·0

The slags rejected contain but little lead; their composition is as follows:—Silica, 25·0; oxide of lead, 2·0; oxide of copper, 1·0; protoxide of iron, 27·0; oxide of zinc, 29·0; oxide of manganese, 8·0; lime, 4·2; magnesia, 1·0; alumina, 1·3; sulphur, 1·0 = 100·0. The lead produced contains no zinc, and, from the composition of the slag, it may be seen that that portion of the metal, which is not volatilised, passes to the state of silicate. At Pontgibaud the ore is a galena, containing a very variable quantity of silver. It is accompanied by iron pyrites, mispickel, blende, sulphate of baryta, and quartz. As the silver is found disseminated in the whole of the earthy matters, the washing is so conducted that they are all preserved; whilst the earthy portions are alone carried off. Two varieties of schlich are thus obtained, which have been analysed by M. Berthier: the following is their composition:—

	Rich schlich.	Poor schlich.
Galena	50·0	30·0
Arsenical pyrites	21·0	30·9
Blende	12·0	18·0
Sulphate of baryta	15·0	17·4
Quartz	2·0—100·0	3·7—100·0

The extreme impurity of these schlichs requires great care in their working. The difficulties have, however, been conquered—thanks to the skill of M. Fournet, manager of the mills, who has completely studied all that is interesting in the metallurgical treatment of the ores of lead.

The schlich is at first roasted in a reverberatory furnace; about 1 ton is operated on at once. The roasting lasts 10 hours—the rich schlich softens towards the end, and occasionally a little lead separates; but the poor schlich never softens, but remains as a dirty reddish powder. The roasted schlichs are composed of—

	Rich schlich.	Poor schlich.
Oxide of lead	52·6	16·9
Sulphuret or lead	8·0	12·1
Oxide of iron	13·0	21·3
Oxide of zinc	9·0	21·6
Arsenic acid	0·4	1·0
Sulphate of baryta	14·0	19·8
Silica	3·0—100·0	6·2—98·9

During the roasting, vapours are disengaged, which condense in the chimney in the pulverulent state; this powder contains—Sulphate of lead, 62·0; oxide of lead, 9·0; arsenic acid, 2·0; oxide of zinc, 15·0; oxide of iron and clay, 12·0 = 100·0. This is essentially a mixture of sulphate and arseniate of lead. The roasted ore is then treated on the slag-hearth; the layers to be fused are composed of—Rich roasted ore, 62·0; poor roasted ore, 3·4; iron, 3·4; calcareous slags, 6·2; slags from previous operation, 25·0 = 100·0. By fusion a workable lead is obtained, which contains, besides silica—Arsenic, 1·0; antimony and sulphur, 0·1; lead, 98·9 = 100·0. No matts are formed—the slags are very fusible, and contain—Silica, 20·0; protoxide of iron, 37·9; baryta, 17·5; lime, 4·4; alumina, 10·0; sulphuret of zinc, 10·2 = 100·0. These slags are remarkable for the presence of blende; it is that which characterises this working. Blende in very large quantities much deranges the working of the furnace, by diminishing the fusibility of the slags. The resulting mixture solidifies on both sides of the nozzle of the tuyere, and also a little above, into masses called "caps" (*bonnets*)—these are obliged to be broken off from time to time, on account of the obstruction they offer to the proper working of the furnace. These "caps" contain about 24 per cent. of blende. During the fusion thick vapours are disengaged, which condense in the upper part of the furnace, in the chimney, or even on the pieces of coke, which are not lighted in the furnace; all these products contain zinc and lead, sometimes as sulphates, arseniates, and oxides, sometimes as sulphurets, and sometimes even as pulverulent metal. It is this last which is found in the deposits which form in the midst of the remains of the coke—deposits which are produced so abundantly, that they are obliged to be taken from the furnace twice or thrice a week. It is especially in the working of the complicated minerals, of which we have spoken, that the important remarks published by M. Berthier apply. M. Berthier has considered successively the action of quartz, sulphate of baryta, pyrites, and blende, and has thus collected the result of his experiments. Quartz remains inert in a roasting conducted at a low temperature; but if the heat be raised, so as to soften the materials, the quartz enters into combination, and forms many silicates—especially silicates of lead. Thus, in working on the large scale, the presence of silica can determine the decomposition of sulphate of lead—so that it may be readily conceived that silica, properly managed, may be made a desulphurating agent; for, by a well-conducted roasting, under the influence of this agent, all sulphates may be destroyed, and converted into subsilicates. Silicate of lead is then reduced; if at the same time, it is exposed to the action of charcoal it is under the influence of an energetic force which can displace oxide of lead. Protoxide of iron often plays this part in smelting furnaces, as does baryta in certain cases. For instance, sulphate of baryta resists roasting; but this body exposed during fusion to the influence of silica, and many deoxidating reagents, produces silicate of baryta, and loses all its sulphuric acid. In certain cases this acid can, in its turn, become a desulphurating reagent, for it can react on sulphuret of lead, by passing to the state of gaseous sulphurous acid, and the sulphur of the latter passing also to the same condition. But if these phenomena take place in the presence of an excess of charcoal, the sulphur is set at liberty, and tends to augment the amount of matts. This sulphate of baryta may be either useful or baneful, according to circum[illegible]nces.

In considering the action of silica, it may be seen that pyrites can become useful in the treatment of lead ores; in roasting, for instance, this substance becomes oxide of iron, and furnishes sulphurous acid, which is given off, or sulphuric acid, which unites with the lead—in this last respect its presence is harmful. But as in fusion oxide of iron takes to itself silica, and thus weakens the reduction of the lead, we can always not only get rid of the iron, but render it of service in the extraction of the lead—in fact, the presence of pyrites finally produces the same effect as an addition of metallic iron in the smelting. An excess of pyrites may become very harmful—it may produce too much oxide of iron, and thus render the slags capable of corroding the side and hearth of the furnace, determining the presence of masses of reduced iron (*iron lumps*), which are difficult of removal. Thus, it is easy to foresee and to regulate, to a certain extent, all that influences the three foregone bodies; but it is not so with blende. According as to whether it be roasted or not, this body produces very various effects—effects which the slightest causes modify in the most capricious manner. The zinc blende it contains never remains united with the lead, part of it volatilizes, and part remains as silicate, or sulphuret. The volatilized zinc is sometimes collected; but the great trouble which must be taken, in proportion to the small quantity returned, renders this disposition generally impracticable. When the slag contains the zinc as oxide, its fusibility is much diminished; but, by associating it with other bases, a very fusible slag may be formed. When it remains as sulphuret it can be disseminated in that state in the slag, as the examination of the Pontgibaud slag sufficiently determines. Thus the sulphuret of zinc may become hurtful when in large excess, by greatly diminishing the fusibility of the slags produced.

We here terminate this week's article, in concluding our account of the metallurgical treatment of the ores of lead: our next will be devoted to the treatment of the ores of mercury—it being thought that these two metals would form the best introduction to the treatment of silver ores, which will immediately follow.

HAND-IN-HAND BUILDING ASSOCIATION.—Shares £100 each, advanced in full—no fee or fine on transfers or withdrawals. £4 per cent. allowed to members withdrawing.—Chairman: W. N. WRIGHT.

The FIRST QUARTERLY BALLOT for the FUNDS of the association will take place on Wednesday next, at half-past Six P.M., at 96, St. Martin's-lane, and those members whose names are drawn will receive their shares in full.—Persons entering on that evening will be entitled to ballot. 44

Rules (price 6d.), and prospectuses can be had of Mr. Wright, 60, Pall-mall; Mr. Gifford, 11, Windmill-street, Finsbury; Mr. Watts, 8, Coleman-street, City; Mr. Butcher, 44, Leader-street, Chelsea.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.

Apply to Mr. CAPPER, ENGINE-MAKER and FOUNDER, BIRMINGHAM. 45

Price.....£14 per horse-power.

NORTHUMBERLAND AND LANCASHIRE JUNCTION RAILWAY COMPANY.—(Registered Provisionally.)

The subscribers to this undertaking having failed to give the number of assents required by Parliament for carrying it on, the directors are proceeding, pursuant to the resolution passed at the general meeting of shareholders, held in London, on the 4th inst., to wind it up with all practicable dispatch.

Holders of scrip, and bankers' receipts for deposits, are requested to forward the same forthwith, with their names and addresses endorsed, addressed to the secretary, either at the offices of Messrs. Maltby, Beachcroft, and Robinson, 34, Old Broad-street, London, or at the company's offices, Quay-side, Newcastle-upon-Tyne, and the receipt will be duly acknowledged. After the expiration of seven days from the receipt of the scrip, payment will be made at the place to which the scrip shall have been sent, to the holders, or whom they shall, by writing, appoint to receive the same, TWENTY-FIVE SHILLINGS, in respect of each share upon which a deposit of 42s. has been paid; and, at the same time, will be delivered certificates (in lieu of the scrip and bankers' receipts), entitling the holders to a rateable proportion of the funds which shall remain, after payment of the said sum of 25s. per share, and after satisfying and discharging all liabilities and expenses.

By order of the directors, THOS. McQUIGE, Secretary.

Company's Offices, Quay-side, Newcastle-upon-Tyne, June 29, 1846. 46

WEAR DOCK RAILWAY COMPANY.—(Registered Provisionally.)—The subscribers to this undertaking having failed to give the number of assents required by Parliament for carrying it on, the directors are proceeding, pursuant to the resolution passed at the general meeting of shareholders, held in London, on the 4th inst., to wind it up with all practicable dispatch.

Holders of scrip, and bankers' receipts for deposits, are requested to forward the same forthwith, with their names and addresses endorsed, addressed to the secretary, either at the offices of Messrs. Maltby, Beachcroft, and Robinson, 34, Old Broad-street, London, or at the company's offices, Quay-side, Newcastle-upon-Tyne, and the receipt will be duly acknowledged. After the expiration of seven days from the receipt of the scrip, payment will be made at the place to which the scrip shall have been sent, to the holders, or whom they shall, by writing, appoint to receive the same, TWENTY-FIVE SHILLINGS, in respect of each share upon which the full deposit has been paid; and, at the same time, will be delivered certificates (in lieu of the scrip and bankers' receipts), entitling the holders to a rateable proportion of the funds which shall remain, after payment of the said sum of 25s. per share, and after satisfying and discharging all liabilities and expenses.

By order of the directors, THOS. McQUIGE, Secretary.

Company's Offices, Quay-side, Newcastle-upon-Tyne, June 29, 1846. 47

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED ELASTIC METALLIC PISTONS.

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is— 48

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

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CHARLES MACINTOSH & CO.

Beg to inform the Public that they are the Patentees and sole Manufacturers of the above Substance. The distinguishing properties of the Patent Vulcanised India Rubber are, its uniform elasticity in various temperatures; its not becoming hard on exposure to extreme cold, nor liable to injury from contact with heat. Its strength is greater than that of native caoutchouc; it is indissoluble in essential oils; it resists the effects of oil and grease in different degrees, according to the purposes for which it is manufactured.

Among the various useful applications of the Patent Vulcanised India Rubber, may be enumerated—

WASHERS or RINGS for joints in steam, and water-pipes, and for valves for steam-engines; by which labour is economised, and the joints more effectually made, than by any other mode.

ELASTIC BANDS, for holding together bundles of letters, papers, &c. 49

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In CALICO-PRINTING, the substitute for blanket has been found to produce a much finer impression than the woollen hitherto used, and with considerably less pressure; hence a saving in power, and wear of lapping.

COVERS for furnishing rollers (in lieu of flannel), are perfect for their purpose; and, as the India Rubber does not absorb moisture, they can be easily cleansed, and no colour need be wasted.

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Cambridge-street, Chorlton-upon-Medlock, Manchester, April, 1846.

CHARLES MACINTOSH & CO., PATENTEES, and SOLE MANUFACTURERS, of the VULCANISED INDIA RUBBER, beg to inform MERCHANTS and FACTORS, that they have ESTABLISHED WORKS at *No. 22, COLESHILL-STREET, BIRMINGHAM,* 50 for the MANUFACTURE of ARTICLES from the VULCANISED INDIA RUBBER, under the patent granted to S. Perry and T. B. Daft; and, for the convenience of those parties who have been supplied with elastic bands for holding together parcels of papers, &c., vest backs, trouser puffs, straps for trousers, boot gussets, belts, garters, &c., they have retained the original numbers given to all the articles, so that orders described accordingly will have immediate attention. The Vulcanised India Rubber has been much improved in quality, and the efflorescence of sulphur on the surface entirely removed.

Cambridge-street, Manchester, June 24, 1846.

PROJECTED RAILWAYS.—BENSON, LOGAN, & CO.'S PATENT METALLIC SAND CEMENT.

Its MERITS, as stated in letter to the proprietors, by James Thomas Knowles, Esq., architect, Raymond's-buildings, Gray's Inn, are—

1.—"The great tenacity with which it adheres to brick, stone, and iron.

2.—"Its freedom (when properly applied) from those cracks and flaws by which the cements generally used for external stuccoing are so frequently disfigured. 51

3.—"The total absence of the unsightly tint produced by vegetation.

4.—"The increased hardness which it acquires from exposure to atmospheric influences.

5.—"The great beauty, accuracy, and durability of the mouldings, capitals of columns, crockets, finials, and other architectural enrichments and decorations formed of it—the smallest and most delicate members of which, as well as the sharpest arises, have withstood uninjured the severities of our climate, during many winters, and now present the same perfect and highly finished appearance as would be produced by stone carvings carefully executed.

6.—"The excellent and agreeable tone of colour which it assumes naturally, and retains without the aid of any colouring or painting.

And, lastly,—"Its extreme hardness and almost entire incompressibility, when used as a mortar, in the construction of inverted or relieving arches, foundations under important superstructures, and small bearing piers, which have to sustain great weights. For all these purposes it has been extensively used under my directions; and, in some cases, has been exposed to *very severe trials*. The results have, however, *without one exception*, been most satisfactory; and I do not believe that there are any known substances so well adapted for the execution of works, in which the greatest strength and durability are essential."

Price of metallic sand at Swansea, place of manufacture, 10s. per ton, or in London, 20s. per ton of 21 bushels.

Further information will be given, and specimens shown, on application to Mr. C. K. Dyer, 4, New Broad-street; and at the Metallic Cement Wharf, King's-road (opposite Pratt-street), Camden New Town, London.

SEYSSEL ASPHALTE COMPANY—CLARIDGE'S PATENT.—ESTABLISHED MARCH, 1838,

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